913.747
Rit

JUN 24 1954

STATEN ISLAND INSTITUTE
OF ARTS AND SCIENCES
146 STUYVESANT PLACE
STATEN ISLAND 1, N. Y.

RESEARCH RECORDS

of the

ROCHESTER
MUSEUM OF ARTS AND SCIENCES
No. 10

Dutch Hollow, an Early Historic Period Seneca Site in Livingston County, New York

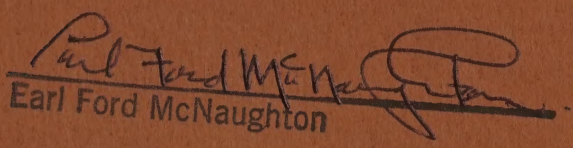
by

William A. Ritchie
State Archeologist
NEW YORK STATE SCIENCE SERVICE AND STATE MUSEUM

ROCHESTER MUSEUM OF ARTS AND SCIENCES
W. Stephen Thomas, Director
ROCHESTER, NEW YORK

1954

Collection of Native North American Indian Books, Historical Books, Atlases, plus other important authors and family heirloom books.
As of 12-31-93



Earl Ford McNaughton

RESEARCH RECORDS

of the

ROCHESTER
MUSEUM OF ARTS AND SCIENCES
No. 10

Dutch Hollow, an Early Historic Period Seneca Site in Livingston County, New York

by

William A. Ritchie
State Archeologist
NEW YORK STATE SCIENCE SERVICE AND STATE MUSEUM

ROCHESTER MUSEUM OF ARTS AND SCIENCES
W. Stephen Thomas, Director
ROCHESTER, NEW YORK

1954

This Research Record is a report on archeological field work conducted under the auspices of the Rochester Museum of Arts and Sciences in 1934. It is one of several reports on research projects carried on in our constant search for information relating to the prehistoric record of our area. In recent years the Rochester Museum Association has subsidized this type of research.

This publication has been made possible through grants of the Rochester Museum Association, the Lewis H. Morgan Chapter, N.Y.S.A.A., and the New York State Archeological Association.

TABLE OF CONTENTS

Introduction 1
Excavations 2
Burial 5 6
Burial 9 7
Burial 26 7
Burial 31 7
Burial 36 7
Burial 38 8
Burial 39 8
Burial 40 8
Burial 41 9
Burial 48 9
Burial 49 10
Burial 56 10
Burial 60 10
Burial 61 15
Burial 67 16
Burial 68 17
Burial 69 18
Artifacts from the Dutch Hollow Site 20
Tools and Weapons of Stone, Bone and Metal 22
Utensils 26
Ceramic Typology 29
Personal Ornaments of Native and European Origin 35
Glass Trade Beads from Dutch Hollow 38
Smoking Pipes of Stone, Clay and Wood 48
Concepts of the Supernatural 50
Ceremonial Paraphernalia 63
Chronology and Trade Relations 69
Bibliography 75

LIST OF ILLUSTRATIONS

Plate 1. Burial (No. 56) of female about 23 years of age, with near-term fetus, in Cemetery 1. 11
Plate 2. Burial (No. 57) of adult male in grave partially lined and covered with boulders, in Cemetery 1. 12
Plate 3. Multiple (family?) burial (No. 60) of young adult male (left) and female with infant, in Cemetery 1. 14
Plate 4. Burial (No. 61) of male, about 24 years of age, in Cemetery 1. 15

Plate 5. Burial (No. 67) of child with abundant grave furnishings, in Cemetery 1. 16
Plate 6. Child burial (No. 68) with numerous offerings, in Cemetery 1. 19
Plate 7. Chipped and rough stone implements from Cemetery 1. . 21
Plate 8. Pre-Iroquoian types of chipped stone implements from Cemeteries 2 and 3. 23
Plate 9. Bone and antler artifacts from Cemetery 1. 25
Plate 10. Bone artifacts from Cemetery 1. 27
Plate 11. Antler figurines from Cemetery 1. 29
Plate 12. Brass ornaments and other artifacts from Cemetery 1. . 32
Plate 13. Various artifacts from Cemeteries 2 and 3. 34
Plate 14. Iron and stone tools and paintstones from Cemetery 1. . 37
Plate 15. Glass, stone and shell beads from Cemetery 1. . . . 39
Plate 16. Glass, shell and bone beads from Cemetery 1. . . . 40
Plate 17. Glass and shell beads from Cemetery 1. 41
Plate 18. Glass and shell beads from Cemetery 1. 42
Plate 19. Stone and pottery pipes from Cemetery 1. 49
Plate 20. Restored pottery vessels from Cemeteries 2 and 3. . . 51
Plate 21. Pottery vessels from Cemetery 2. 51
Plate 22. Double-mouthed pottery vessels from Cemeteries 1 and 2. 52
Plate 23. Pottery vessels from Cemetery 1. 53
Plate 24. Restored pottery vessels of Seneca Barbed Collar type from Cemetery 1. 54
Plate 25. Restored and intact pottery vessels from Cemetery 1. . . 55
Plate 26. Restored pottery vessels from Cemetery 1. 56
Plate 27. Restored and intact pottery vessels from Cemetery 1. . . 57
Plate 28. Intact and restored pottery vessels from Cemetery 1. . . 58
Plate 29. Restored pottery vessels from Cemetery 1. 59
Plate 30. Intact and restored pottery vessels from Cemetery 1. . . 60

LIST OF TABLES

Table 1. Condensed Record of the Burials in Cemetery 1 . . . 80
Table 2. Condensed Record of the Burials in Cemetery 2 . . . 85
Table 3. Condensed Record of the Burials in Cemetery 3 . . . 91
Table 4. Condensed Record of the Burials in Cemeteries 4 and 5, and in Village Area 94
Table 5. Distribution of Grave Goods in Cemetery 1. 96
Table 6. Pottery Distribution, Dutch Hollow Burials 97

Dutch Hollow, an Early Historic Period Seneca Site in Livingston County, New York

by WILLIAM A. RITCHIE, *State Archeologist*

INTRODUCTION

FOR over 50 years the village and burial sites of the Seneca Indians, who anciently inhabited that region of western New York State lying between the Genesee River and Seneca Lake, have been subjected to more or less random excavations centering for the most part around the avocation of relic collecting. Until recent years archeology as a means for the decipherment of Seneca history and ethnology has had but a minor role[1] and only now, when the known sites have reached a condition of near exhaustion, are these potentialities receiving a certain recognition.[2]

The present account, dealing with the excavation of the cemeteries on the Dutch Hollow site, represents the first large scale report on a Seneca site of the historic period. It is at best only a fragment of the record preserved archeologically at a single large village site, but as will be seen, it will suffice to illumine a significant portion of the beliefs and customs of a major Iroquoian tribal group at that period of their history when traditional ways of life were in early process of acculturation under indirect European influences. Until about a generation before their settlement at Dutch Hollow the Senecas were still unaffected by the exotic forces which were, some two centuries hence, almost wholly to effect their destruction as a native people and culture.

But at the particular episode in their history depicted by the physical and cultural remains buried at Dutch Hollow, even the most prophetically minded Seneca could not have conjured up "the shape of things to come" in so short a span of years. From his viewpoint with respect to time's moving finger a novel channel of wealth would seem to be opening before him. The toil-alleviating tools, utensils and weapons of iron and brass; the pleasurable variety of ego-enhancing adornments of glass and metal; the exciting novelties and promise of even greater possessions would convey no portends of their ultimate legitimate consequences of adoption. Without pos-

---

1 Houghton's studies are the most outstanding in this regard (see Houghton, 1912; 1922).

2 The stimulus afforded by the Iroquois Conferences, held annually since 1945, at Allegany State Park, is largely to be credited both with the revival of interest in broader Iroquois studies and with the coordinated efforts of a number of students in various related fields in a fresh attempt at the solution of major problems involving the genesis, differentiation, development, interrelations, etc. of Iroquoian culture. Some of the results of these recent investigations have already appeared in print (Speck 1945; Snyderman, 1948; P. A. W. Wallace, 1948; Fenton, 1949; Kidd, 1949; Fenton, Deardorf, Wallace, Kurath, *et al.* in Fenton (ed.), 1951; Fenton and Witthoft, 1951; Grassmann, 1952, 1952a; MacNeish, 1952; Ritchie, 1952; A. F. C. Wallace, 1952; Lounsbury, 1953; Wray and Schoff, 1953).

sible comprehension of the complex historical circumstances so recently inaugurated by the already effete Old World's discovery in the New of apparently illimitable material sources of rejuvenation, it was not in the effective vision of the Seneca (or indeed of any contemporary mind) to envision the disastrous corollaries of the new order,—the European and native rivalries engendered by the fur trade, the resulting intensification of internecine tribal warfare, the decimation wrought by imported epidemic diseases, the loss of self dependency,[1] and the final involvement in the losing contest for possession of the homeland.

Hence it may be assumed that the Dutch Hollow citizen, no less than the culturally standardized human being in other societies, conducted his prescribed obligations from day to day, with small concern for the inevitable processes of causality. Some comprehension of the nature of this everyday pattern of life, as it reflected the value-attitude systems of Seneca society at that time (systems presumably shared more or less fully by their contemporary Iroquoian kinsmen) may be achieved through an evaluation of the ideas and activities implied by the burial practices and material possessions. Here the archeologist will enter into reciprocal relations with the ethnologist and historian, basing his interpretations in part upon their data and in turn providing confirmation or additional information for their respective reconstructions.

Excavations

The Dutch Hollow village and burial site occupies an extent of some 15 acres of the Malone (old John Cleary) farm, on lots 85 and 87, in the east-central part of the township of Avon, Livingston County, New York.[2] Since its discovery many years ago it has been a fertile source of Indian relic collections and most of the refuse deposits were dug over long prior to the finding and excavation of the cemeteries. A small part of the material so obtained, and ultimately acquired by the Rochester Museum of Arts and

---

[1] As Hunt remarks in his penetrating analysis of Iroquois history of this period, "The native who had known and used the keen steel tools of the white man was unlikely to renounce them and was shortly unable to do so, so swiftly did the skills of the Stone Age vanish. 'The coveted tools or implements represented a value not measurable by any reach of wild territory. A metal kettle, a spear, a knife, a hatchet, transformed the whole life of a savage.' " (Hunt, 1940, p. 19.)

At a somewhat later period this consuming drive for white man's goods is reaffirmed by Hunt in the following statement: "Lahontan realized the unfortunate position of the Iroquois when he wrote that 'by these means the Iroquese, being unprovided with Beaver skins to be given in exchange for Guns, Powder, Ball and Nets, would be starved to death, or at least obliged to leave their country.' Corn they had in plenty, and game could be procured, but the white man did not want corn, and had not wanted it since the first hard years." (Ibid., p. 35.)

It may, however, seriously be questioned whether this need for trade goods rested upon an economic or a psychological foundation. The long established agricultural basis of Iroquoian life was not (except for the Huron [Fenton, 1940, p. 189]) greatly disturbed by involvement in trade relations with Europeans, as the facts of archeology and history clearly reveal. The heavy preponderance of personal ornaments in the lists of acquired goods from Seneca sites of all periods up to around 1700, strongly suggests that the need for trade had its major roots in prestige factors.

[2] Listed as site number 16 in Parker, 1922, p. 588.

Sciences and the New York State Museum, will be inventoried later on.

The village area and its environs consist in large part of slightly sloping, well drained sandy loam or sand,[1] easily tillable with simple hoe and digging stick. It is underlaid by Hamilton shale and sandstone of Middle Devonian age.[2] As in the case of many of the prehistoric and most of the earlier historic period Seneca sites, it occupies the Glaciated Allegany Plateau section of the Appalachian Plateau Province, in this case lying on the lower (altitude about 900 feet) northern fringe.[3] At the time of Seneca inhabitancy and, indeed, until the advent of white settlers soon after the American Revolution, this land was covered with a climax forest characterized by dominance of oaks, hickories, chestnut, tulip-tree, etc.,[4] which provided a particularly suitable habitat for the deer and wild turkey, whose bones occur in considerable abundance in the refuse deposits and in some numbers in the graves (see Pl. 9, figs. 7, 11).

Along the southern boundary of the village area flowed a small stream which was enlarged many years ago as the State Ditch to provide improved drainage for the South Lima Swamp. This stream finally enters Conesus Creek, outlet of Conesus Lake, at a point just south of Avon, called Ashantee. While it is possible that under forested conditions this stream may have been navigable by canoe, in the light of known Iroquoian customs, it is more probable that travel was by a network of footpaths through the forests.

At the northwest corner of the site, and again on the south side, there are large springs which probably provided an abundance of potable water.

Large, irregular, darkly stained patches in the village area probably mark dwelling loci and it might be possible even at this late date to expose post-mold patterns which would afford some knowledge of the settlement plan, particularly of the shape, size and locations of the houses. It is not known whether or not the village was palisaded as in the case of the slightly earlier Adams site in the same county.[5]

Although the efforts of many people are said to have been expended from time to time on a search for the burials, no cemetery was found until September, 1934, when the late John H. Bailey, then an assistant to the writer in the Division of Archeology of the Rochester Museum of Arts and Sciences, discovered three graves on the slope of the low sand ridge flanking the eastern edge of the habitation area, and close to the long abandoned burial

---

1 Ontario loam, of glacial till origin, derived from mixed materials including limestone, and of high productivity. (General Soil Map of New York. Compiled by F. B. Howe. Cornell Univ. Agricultural Experiment Station, Dept. of Agronomy, in cooperation with U. S. Dept. of Agriculture, Bureau of Chemistry and Soils, 1933.)

2 Economic and Geologic Map of the State of New York. Frederick J. H. Merrill. Regents of the Univ of the State of New York, 1895.

3 Fenneman, 1938, pp. 304-319.

4 Bray, 1930, pp. 68-70.

5 Explored by Charles F. Wray and Harry L. Schoff since 1948. Dated by Wray between 1550-1575. Their work confirmed the existence of the fortification outlined in Squire, 1851, pp. 91-93.

plot pertaining to early white occupation. After rather difficult negotiations with the land-owner, the Rochester Museum obtained a 30-day lease to conduct excavations, beginning on September 28, 1934. There followed a long period of unusually wet and cold weather, despite which the writer, with the aid of several WPA assistants, succeeded in locating and excavating 67 additional graves in the same area, which has herein been described as Cemetery 1. (See Condensed Record of the Burials, Table 1, pp. 80-84.) The site was thereafter closed under the terms of the lease.

Ten years later, Mr. Robert R. Hill of Rochester, succeeded in obtaining permission to excavate and discovered a second cemetery (referred to herein as Cemetery 2) on a very low rise of ground situated in part on the Malone property, in larger part on the adjacent Landon farm, about 600 feet northwest of Cemetery 1. This was excavated by him and other persons over a period of several years, during which a total of approximately 175 burials were found. (See Condensed Record of the Burials, Table 2, pp. 85-91.)

In 1948, Mr. Hill located a third large group of graves on the neighboring Batzel farm, also on a very low sandy rise, approximately one-eighth of a mile southwest of Cemetery 2 and one-quarter mile west of Cemetery 1. Cemetery 3 was also excavated by Mr. Hill and others, yielding some 75 to 80 graves. (See Condensed Record of the Burials, Table 3, pp. 91-93.)

Two additional small burial clusters, termed Cemeteries 4 and 5, respectively, in this report, were recently found by Mr. Hill (1951, 1952). The first comprised eight graves which occupied low ground near the south-central periphery of the village area; the second also consisted of eight closely grouped burials centered about 75 feet west of Cemetery 2 and on the same low eminence. (See Condensed Record of the Burials, Table 4, pp. 94-95.) Through the courtesy of Mr. Hill the writer has been privileged to study and in part photograph the grave goods from Cemeteries 2-5 and to utilize in the preparation of this report the data contained in his field notes.

It is possible to make a few generalizations concerning these cemeteries and burials. Preference in the location of the cemeteries was accorded a rise of ground, number 4 being the only exception. Cemetery 1 was the best situated both with respect to elevation, reaching some 20 feet above the general village site level, and to soil, since the sandy mantle of the whole site was here the deepest, exceeding 6 feet in some places before the clay hardpan was reached. Cemeteries 2, 3 and 5, rising only 2 or 3 feet above the surrounding levels, were covered with at most a few feet of sand and here a large number of the burials were made on or in the clay, resulting through poor drainage in a generally defective state of preservation of all osseous material, skeletal and artifactual.

Insofar as determinable, burial on the Dutch Hollow site was invariably

in the flexed position, either loosely[1] or tightly folded in about equal numbers, and generally on the side. No disturbance, except by rodent action, of any grave was noted, such as occurs not infrequently in sites of the period about 1640-87.[2]

No definite order of orientation or grouping of burials could be detected in any cemetery. Of the total of 264 graves found by the Rochester Museum and Mr. Hill, 171 or 65% were provided with mortuary offerings (including personal ornaments which may have formed part of the apparel of the deceased).[3]

Inasmuch as Cemetery 1, excavated by the Rochester Museum, provided the best preserved skeletal and industrial remains and the recorded data are the most complete for this feature, the following analysis of population composition, and age and sex association of grave goods, shown in Table 5, (p. 96) is based thereon.

In this cemetery mortuary offerings, exclusive of personal adornments only, were present in 69% of all burials, occurring somewhat more frequently with adult females than with adult males, and being most prevalent with children. This fact would tend to support the inference, sustained by ethnological sources, that women and children enjoyed high status in Seneca society even in ancient times.

In deriving the composition of the population from the data at hand from Cemetery 1 we are even here seriously handicapped by a large proportion of unsatisfactory skeletal material, the most decayed of which was not collected, but aged and sexed in the field on the basis of dentition, suture closure and epiphyseal factors. The most intact specimens were removed to the Rochester Museum where they were morphologically and metrically studied, aged and sexed, in June, 1949, by Dr. Georg K. Neumann and the writer. Other results of this study will appear later in the report.

Table 5, based upon the skeletal remains of 81 individuals from 60 single and ten multiple interments in Cemetery 1, shows that 50.3% of the population of this cemetery, about equally divided between the sexes, had attained

---

1 Angle of femurs with body axis less than 90°.

2 Several explanations, none of which seems wholly adequate, have been offered in explanation of this phenomenon. The looting of graves by the Indians themselves to obtain wampum and ornaments and the exploitations of early white settlers in search of iron have been mentioned by several students of this problem and seem to have some support in documentary evidence, as shown by H. L. Schoff in a recent discussion (paper entitled, "Evidence of Looting of Seneca Graves," given at annual meeting, New York State Archeological Association, Rochester, April 18, 1953).

The following observation made by the Jesuits in Huronia may shed some light on the matter: "The ceremony concluded with a feast, the best morsels of which were reserved for the sick persons of rank in the Village. As all this could not arrest the tears and the cries of one mother, one of the relatives, in order to testify his devotion by consoling her, disinterred the dead body; and, after clothing it with new garments, he threw the grave-clothes into the fire. This he did two or three times on different occasions, until he found nothing but the bare bones, which he wrapped up in a covering to present them to the afflicted woman. Finally, some time after these ceremonies, the liberality of those who have given presents of consolation is acknowledged by distributing among them the effects of the deceased, to which other things are added if these do not suffice." (Thwaites, Vol. 43, pp. 269, 271.)

3 For approximately 50 additional graves found in Cemeteries 2 and 3 by persons other than Mr. Hill no data are at present available.

to adult age (19-50 years), but only 4.9% survived into senility (over 50 years). Of the adult group, the average age at death was about 31 years, the median age, about 28 years. Nearly half the population (42%), of which the larger part (24.7%) were children (4-12 years), died while still immature. The included mortality figure of 9.9% for infants (to 3 years) probably does not reflect the true state of affairs, since many young infants, especially if not provided with grave furnishings, would probably have decayed completely leaving no trace. These data reveal a low life expectancy for the average Seneca of the Dutch Hollow village.

As to the causes of death, very little can be stated. No evidences of violent trauma were observed, hence active warfare is not indicated. Save for minor lesions of chronic arthritis seen on the vertebrae of burials 7, 43, 48, 72a and 75, and widespread dental caries and abscesses due mainly to caries, no gross pathology affecting bone was observed. A suggestion of acute epidemic disease, probably transmitted, although not necessarily directly, as the result of white contact, is afforded by the fairly numerous multiple burials, in particular by burial 60, described on pages 10, 13-14.

Certain of the burials found by the writer and his aides in Cemetery 1 are of especial interest in elucidating the ideas and customs concerning the mortuary practices of the Senecas of the early historic period. The descriptive data which follow will later in this report be utilized in an interpretative manner.

Burial 5. In a grave 32 inches deep, 24 inches long and 20 inches wide, lay the badly decayed bones of an infant about 3 years of age. The skeleton reposed on the left side, facing northeast and heading southwest, but as only skull fragments and a few cervical vertebrae remained the position was indeterminate. In all probability it had been flexed on interment.

Behind the skull, and evidently originally in the hair, was found a partially decomposed antler effigy comb (AR 27750) shown in Pl. 9, fig. 26. Four tubular brass beads (AR 27754, Pl. 12, fig. 14) and two conical sheet brass "fringe ornaments" (AR 27754, Pl. 12, fig. 9), all retaining bits of the leather thong on which they had been tied in a granny knot (see fig. 14), surrounded the comb, and may also have been hair ornaments. In the neck region occurred a number of small, blue and red glass, seed beads; long, rectangular red glass beads, showing an unusual twist; and a single striped polychrome bead (AR 27753), which were probably worn as a necklace, strung in the approximate manner illustrated on Pl. 17, fig. 1. Two crushed pots (AR 27751-52) were before the face. The first was of Dutch Hollow Notched type, the second, portrayed in Pl. 26, fig. 2, is a Seneca Barbed Collar vessel. Beneath the latter were vestiges of a beaded fiber bag which seems to have contained eight unworked penis bones of the raccoon and two short bone tubes, all considerably decayed and perhaps constituting *in toto* the remnants of a medicine pouch.

Burial 9. This feature comprised a double burial of infants, lying side by side in a grave fossa measuring 23 inches deep, 41 inches long and 34 inches wide. The bodies had been loosely flexed and lay on the right side, with face to the south and skull top to the west. Large stone slabs and cobbles completely covered and crushed the very poorly preserved remains. Considerable humus stain occurred in the grave fill. A crushed pot of Long Point Nocked type (AR 27756) lay beside the skeleton on the south side (see illustration on Pl. 26, fig. 1). Near the pot were a group of polychrome glass beads (AR 27757, Pl. 15, fig. 6) and a much decayed pendant, 1¾ x 1¼ inches, made from the whorl of a conch shell (AR 42262).

Burial 26. This interment consisted of the partially decayed skeleton of a woman between 34 and 37 years of age, closely flexed on the right side, facing the south and heading west, in a grave 44 inches long, 34 inches wide and 36 inches deep. At the left elbow lay a crushed pot (AR 29371) of Ripley Corded type (see Pl. 27, fig. 3) containing seed beads and large spherical striped beads (AR 27772, Pl. 16, fig. 6). A nearly decayed turtle shell rattle, covering a mass of berry seeds, about one foot in diameter and ¾ inch thick, probably the residue of a "berry cake," lay beneath the back, while on the left wrist was worn a broad sheet brass bracelet (AR 27771) shown on Pl. 12, fig. 22.

Burial 31. This burial is of interest in emphasizing again the Seneca's regard for their young. The remains of an infant approximately a year and a half of age and in a very poor state of preservation, were found loosely flexed on the right side, facing the south, with head top to the west, in a grave dug 27 inches deep, 24 inches long and 18 inches wide. Loose about the neck were 38 short and one long native wampum beads (AR 27774), while behind the flattened skull lay a partially decayed bone comb of European manufacture (AR 27775) pictured on Pl. 9, fig. 23. What appears to be a brass wire bracelet (AR 27776, Pl. 12, fig. 23) was also found beneath the skull and behind the hips occurred the brass bowl lining (AR 27777, Pl. 12, fig. 6), all that remained of a wooden smoking pipe, an apparently incongruous offering in an infant's grave.

Burial 36. One of the few well preserved skeletons (AP 343) was exhumed from a deep (51 inches), broad (58 x 35 inches) grave. It pertained to a woman some 47 years of age who lay, loosely flexed, upon her left side, looking to the north and heading west. Between her knees was found an ornamented vasiform stone pipe (AR 27779, Pl. 19, fig. 3), close to the anterior maxillae of a large dog (AR 27780, Pl. 10, fig. 5). A crushed brass kettle and a clay pot (AR 27746) in the same condition, lay behind the skull. The pot, of Seneca Barbed Collar type, contained 15 broken fragments (1"-5" long) of animal bone (AR 27785) mostly rib sections of deer and smaller mammals, evidently the residue of a meat stew. Near the knees had been placed the following objects: a flint end scraper (AR 27782), an iron

awl (AR 27781, Pl. 14, fig. 5), an iron knife (AR 27784), and an iron scraper (AR 27783, Pl. 14, fig. 1).

Burial 38. A triple burial of children about 6 to 8 years of age occurred in a common grave 2 feet in depth. All were loosely flexed, but the orientation differed in each case. The first one (a) faced south, headed west, and lay on the right side. About the neck were the oval glass beads of a necklace (AR 27792, Pl. 16, fig. 13). The cut anterior section of a wolf skull (AR 27791, Pl. 10, fig. 6) and an iron axe (AR 27786) lay over the head. The former probably remained from a wolfskin robe worn as described in another section of this report.

Skeleton "b," which partially overlapped "a," reposed on the back, face upward, and head to the west. Like the others, the bones were in poor condition due to decay. About 20 small discoidal shell beads (AR 27792, Pl. 16, fig. 13) and two perforated bear canines (AR 27789, Pl. 9, fig. 5) had evidently been strung at the neck.

Skeleton "c," which in turn partly overlay "b" and represented the last body placed in the grave, was on the left side, facing north and heading west. An iron axe (AR 27787) rested above the skull. Surrounding the postcranial skeleton were the following offerings: an antler gaming disk (AR 27788), the unworked proximal section of a deer femur (AR 27790), the unmodified wing and leg bones of a large wild duck (sp.?) (AR 27793), and an unworked piece of limonite, probably a paintstone, which is shown on Pl. 14, fig. 10.

Burial 39. This comprised the loosely flexed skeleton (AP 355), in fair condition, of an adult male about 26 years of age, inhumed in a supine position. The canted skull faced towards the feet (west), with skull top southeast, in a grave whose dimensions were 57 inches (deep) and 57 x 36 inches. At the left side of the skull was a quantity of some decayed organic substance which was not identified. Also near the head lay nine perforated dog canine teeth, each separated by a discoidal shell spacer (AR 27796), evidently a necklace. At the left shoulder was found the anterior portion of the upper jaw of a bear, perhaps from a bearskin robe or cape, and nearby a bear humerus, both very much decayed. Along the left upper arm lay an iron knife. At the left elbow, beneath a handful of red ochre, was found a pottery pipe of square-topped trumpet form (AR 27794, Pl. 19, fig. 5), while another larger, plain trumpet pipe (AR 27795, Pl. 19, fig. 6) occurred at the knees.

Burial 40. The grave had been dug into a pocket of hard reddish clay soil on the sand knoll, to a depth of 39 inches, a length of 41 inches and a breadth of 36 inches. Remnants of a bark lining still persisted over the grave bottom and abundant traces of humus and charcoal were observed in the fill.

Tightly flexed on the left side, facing south and heading west, was the grave's occupant, an adult female skeleton (AP 363) in a fair state of preservation. Behind the skull, and perhaps originally in the hair, were the following articles: a very badly decomposed four-toothed antler comb decorated on the top with four roughly circular projections, possibly human head effigies, each surmounting a tooth, and eight tubular sheet brass beads (AR 27798). Closely associated were a turtle shell rattle and eight antler gaming discs (AR 27797), all in extremely poor condition. Of more interest, before the face, with the left knee and left hand resting upon it was the skeleton of a large dog, whose skull measured 6½ inches in length, which had been killed by the blow of a pronged club delivered over the left orbit.

Burial 41. One of several multiple burials, number 41 was a double interment of an adult female and a child about 5 years of age, both very poorly preserved, lying on the clay floor of a circular grave pit measuring 41 inches deep and 66 inches in diameter. The loosely flexed skeletons reposed close together on the left side, facing west, head to south.

Four bear claw cores (AR 42258) found behind the child's skull suggest a hair ornament, while an antler figurine (AR 27802, Pl. 11, fig. 4) from beneath the chin, was almost certainly worn suspended from the neck.

The woman had been provided with two pottery vessels, each crushed under a rock cover, one (AR 27801, Pl. 26, fig. 3) of Seneca Barbed Collar type, at the knees; another, too badly crushed for restoration, near the head. At the base of the skull rested the decayed remnants of what appeared to represent a box turtle shell rattle.

Burial 48. This was a double burial of two adult males, one directly above the other, both closely flexed on the left side, facing north and heading west. The first interred (AP 356), at a depth of 33 inches, was in poor condition; the uppermost skeleton (AP 347), in a fair state of preservation, pertained to an individual about 42 years of age. Ankylosis of two of the lumbar vertebrae was present.

A triangular flint arrowhead (AR 27814) lay among the ribs of AP 356 and seems to have been displaced from a group of burial offerings higher in the grave. Around the two skulls, which were in contact, occurred the following objects, all probably hair ornaments: the beak and 16 claw cores probably of the great horned owl (AR 27813, 27817, Pl. 9, figs. 1, 2) and two wing bones of the wild turkey (AR 27818, Pl. 9, fig. 7). Between the legs of the two skeletons were found four bear claw cores (AR 27818). A crushed pottery vessel (AR 27826, Pl. 28, fig. 3) of Ithaca Linear type, rested 9 inches in front of and 4 inches above the locus of the skulls. Behind the right hip of AP 347 was a heap of offerings comprising the following: a bird effigy pottery pipe (AR 27825, Pl. 19, fig. 4), a conical antler arrow-point (AR 27815, Pl. 9, fig. 22), a multiperforated piece of sheet brass (AR

27816, Pl. 12, fig. 19), nine flat sandstone pebble whetstones (AR 27824, Pl. 7, figs. 34, 36), a twisted strip of sheet brass preserving bits of feather and woven fabric within, possibly a feather-fan handle (AR 27821, Pl. 12, fig. 5), a section of split antler beam, evidently a blank or reject (AR 27819), an iron knife (AR 27823, Pl. 14, fig. 11), an iron scraper blade, 2¾ inches long (AR 27822), and six triangular flint arrowpoints (AR 27814, Pl. 7, figs. 12, 15, 17) similar to the specimen found in the rib cage of AP 356.

Burial 49. The grave, 22 inches deep, contained the well preserved, closely flexed skeleton (AP 345) of a woman approximately 25 years old, lying on the right side with both hands before the face, facing north and heading east. The body had been covered with small boulders resulting in the crushing of some of the bones, including part of the skull and a pottery vessel (AR 27827, Pl. 29, fig. 2) of Long Point Horizontal type, which had been placed behind the head. Under the mandible lay a pair of bear claw cores (AR 27828, Pl. 9, fig. 3), a second pair occurred a few inches farther down, and still a third pair lay near the feet. Close to the hips was a single gaming disk of antler (AR 27820).

Burial 56. The nearly circular grave fossa had a diameter of 48 inches and a depth of 32 inches. It had been dug for the body of a young woman about 23 years old, who may have died during childbirth, since the bones of a fetus at term were contained in the pelvic cavity and the skull fragments lay just below the pubic bones (see Plate 1). The mother's skeleton (AP 342), closely flexed on the left side, face to the north and head to the west, was in exceptionally good condition.

Below the hands, and in front of the face, had been placed a box turtle shell rattle (AR 27914, Pl. 10, fig. 1). A crushed pottery vessel of Dutch Hollow Notched type (AR 27935, Pl. 25, fig. 2), was found behind the shoulders.

Burial 60. The most dramatic and revealing single feature of the Dutch Hollow site was burial 60, apparently a family interment, consisting of a young adult man and woman, each about 20 years of age, a very young infant, and a large dog. As shown on Plate 3, the male (AP 346) lay in a loosely flexed supine position to the left of the female (AP 338), facing toward the south, with head top to the west. The bones were in fair to good condition, although the skull was pressure fractured. At the knees lay the nearly intact skeleton of a large dog (length of skull 6½ inches), killed by a blow from a pronged club at the base of the right parietal bone.

Close beside the male, on the same level, 16 inches from the surface, was the loosely flexed female skeleton, in a good state of preservation, reposing on the left side, also headed west, but facing north. Below her left elbow occurred the bones of a new-born infant, or possibly a fetus at term, displaced by the decay and settling of the grave's contents.

Plate 1. Burial (No. 56) of female about 23 years of age, with near-term fetus. Right innominate bone displaced over femurs to show fetal skeleton. Box turtle rattle (AR 27914) at hands and crushed pot (AR 27935) (shown by arrows) behind shoulders. Cemetery 1.

Plate 2. Burial (No. 57) of adult male in grave partially lined and covered with boulders, in Cemetery 1.

The dead had been richly accoutered. Close beside the right shoulder of the male lay a large iron axe (AR 27853, Pl. 14, fig. 15). Near the right elbow rested a large iron case knife retaining remnants of the wooden handle (AR 27839, Pl. 14, fig. 13), a group of six heavy corner- and side-notched flint points (two broken), typical of the Laurentian culture (AR 27840, Pl. 7, figs. 19-22, 29), two broad trianguloid flint knives (AR 27841, Pl. 7, fig. 28), a faceted graphite paintstone (AR 27842, Pl. 14, fig. 7), and a piece of rough hematite, perhaps an unused paintstone (AR 27843). The numerous small blue glass beads of a necklace (AR 27844, Pl. 17, fig. 3) were found around the neck.

Clustered over the left arm and before the face of the female were the following artifacts, most of which can be identified in the photograph, Pl. 3: seven antler gaming disks (AR 27850, Pl. 9, fig. 17); and in a tight little mass at the right hand, three perforated sheet brass disks (AR 27849, Pl. 12, fig. 8), three cylindrical sheet brass beads (AR 27847, Pl. 12, fig. 13), a number of large discoidal shell and glass beads (AR 27845, Pl. 15, fig. 4), about a handful of powdered hematite paint, and the skull of a weasel (AR 27851, Pl. 12, fig. 2); and, across the left forearm, several hundred small discoidal shell and glass beads (AR 27852, Pl. 18, fig. 1). These seemed to have been strung either alternately (as red, then blue) or with the various colors and kinds together, to form the fringe decoration of a sash, or perhaps a medicine pouch, the contents of which are suggested by the weasel skull, red paint, brass beads and disks and probably some or all of the beads (AR 27845). Beneath the shoulders was found a single triangular flint arrowpoint (AR 27846, Pl. 7, fig. 13).

This extraordinary burial seems to the writer to represent a young family group, dead of contagious disease introduced through the trade channels with Europeans. The man was provided with the equipment of a hunter—dog, axe, knives (both iron and flint), and magical hunting points. (This matter will be discussed in detail in a later section of this report dealing with the exotic points found in three cemeteries.) The woman seems to have gone to the grave with a medicine bag containing a weasel skin with skull attached, holding perhaps perishable articles and offerings to the fetish such as occurred in two other cases in Cemetery 1 where medicine bags actually survived—i.e., in burials 70 and 73; and a set of gaming disks, probably originally in a wooden dish, to provide amusement in the spirit life. She also took with her a newborn, stillborn, or unborn infant. If alive, the baby may well have been immolated with its mother.

Both adults were evidently clothed and ornamented and provided with pigments for facial decoration.

Plate 3. Multiple (family?) burial (No. 60) of young (about 20) adult male (left) and female with infant. Note large dog at knees of male, also grave goods with both skeletons. Cemetery 1.

Plate 4. Burial (No. 61) of male, about 24 years of age, with variety of grave goods, in Cemetery 1.

Burial 61. One of the best preserved skeletons found at Dutch Hollow was that of a male (AP 344) about 24 years of age, found in a grave only 16 inches deep (Plate 4). It reposed upon the back in a loosely flexed position, facing toward the east, with head toward the west. Both hands were folded upon the upper chest, the right hand grasping a large iron knife (AR 27854, Pl. 14, fig. 12). Behind the skull, and probably originally in the hair, was a

wolf (?) effigy antler comb (AR 27855, Pl. 9, fig. 25). A few inches to the left of the skull lay three triangular arrowpoints (AR 27856, Pl. 7, figs. 1-3). Opposite the left upper arm occurred three more points of the same typically Iroquoian form (AR 27856, Pl. 7, fig. 4), together with three broad, heavy, side-notched and stemmed Laurentian type points (AR 37848, Pl. 7, figs. 23, 24, 30), two flint spalls (AR 27857, Pl. 7, figs. 25, 26), an antler flint flaking tool (AR 27859, Pl. 9, fig. 20), an unworked beaver incisor (AR 27862), four imperforate dog canines (AR 27860, Pl. 9, fig. 13), three sandstone pebble whetstones (AR 27863, Pl. 7, figs. 33, 35), a faceted graphite paintstone (AR 27861, Pl. 14, fig. 8), an iron wire bracelet (AR 27858, Pl. 12, fig. 21), and several small pieces of unworked hematite.

Burial 67. Early observers made frequent mention of parental devotion to children among the Iroquois. Burial 67 is another of the numerous archeo-

Plate 5. Burial (No. 67) of child with food remains (front of face), pot (AR 27873) containing turtle shell rattle (AR 27869), antler figurines (AR 27871-72) and glass beads (AR 27870) near neck, in Cemetery 1.

logically attested validations of such historical statements. It comprised the partly disintegrated skeleton of a child, some 6 years of age (AP 359), loosely flexed on the back, right hand on chest, left hand on stomach, facing east, heading northwest, in a grave 31 inches deep, 32 inches long, and 24 inches wide (Plate 5). The bad condition of certain of the bones here, and in a number of other instances in Cemetery 1, resulted from the fact that the grave fossa, dug through sand or sandy loam, terminated at a stratum of impervious clay which inhibited drainage of the fluids of decomposition and ground water.

A few inches before the face, a cluster of small bird bones indicated an offering of food. In a nearly intact pot (AR 27873, Pl. 25, fig. 3) of Seneca Barbed Collar type, placed behind the skull, were found the fragments of a turtle shell rattle (AR 27869, Pl. 10, fig. 3), apparently made from a young box turtle. What may have been pendant ornaments for the neck (or much more likely protective amulets) are the two antler figurines (AR 27871-72), shown *in situ* on Plate 5, and with other examples, all from burials of infants or children, on Pl. 11, figs. 1, 2. A necklace of small glass "seed" beads, with six large white-striped blue beads worn under the chin (AR 27870, Pl. 16, fig. 4), completes the inventory of surviving cultural material.

Burial 68. The most impressive illustration of the sentiment discussed in connection with the preceding burial is seen in the present instance. Here a child with a dental age of about 12 years (AP 358) had been placed in a loosely flexed position on the right side, facing southeast and heading west, in a bark-lined grave, 13 inches deep, 39 inches long and 24 inches wide, dug in a clay-sand mixture (Plate 6). The unusual shallowness of this grave may be due to recent erosion, as in other cases in Cemetery 1, where the grave was situated on the slope of the knoll. Despite the proximity to plow-line and the pressure fracturing of the skull, the bones remained in fair condition.

The abundant grave goods occupied two areas of concentration, viz., over the chest and near the right shoulder. In the first named locus occurred the following articles: 14 antler gaming balls (?) and one in process of manufacture (AR 27887, AR 27890, Pl. 9, figs. 18, 19), three imperforate bear canine teeth (AR 27886, Pl. 9, fig. 12), an antler human face effigy (AR 27889, Pl. 9, fig. 10), ten long, rectangular beads of red slate (AR 27874, Pl. 15, fig. 2), several hundred native wampum and glass beads (AR 27875, Pl. 18, fig. 3), an iron case knife fragment, 2½ inches long (AR 27896), a small quantity of powdered hematite paint, and a box turtle-shell rattle (AR 27885).

The second aggregation contained six large cylindrical sheet brass beads on a leather thong (AR 27894, Pl. 12, fig. 7), portions of a brass hawk bell (AR 27888, Pl. 12, fig. 12), a large rectangular piece of sheet brass (AR 27892, Pl. 12, fig. 20), an effigy antler comb, remarkably well preserved by

contact with the brass plate just mentioned (AR 27898, Pl. 9, fig. 24), the unworked os penis of a raccoon (AR 27893, Pl. 9, fig. 6, left), an iron awl stub in a wooden handle (AR 27897, Pl. 14, fig. 6), and a wooden bowl fragment (AR 27891).

Both wrists were encircled by broad sheet brass bracelets (AR 27899), below which were found a double row of native wampum beads, evidently from a cuff decoration.

The scapulae and several long bones of a small unidentified mammal, probably a food offering, lay near the knees.

Burial 69. Still another illustration of the high regard for children in this society is afforded by the accompaniments of an individual some 4 years of age, whose defective remains were found in a loosely flexed position on the right side, facing south and heading west, in a grave dug 23 inches into sandy clay.

The left hand held an antler figurine (AR 27876, Pl. 11, fig. 3) near the face; the right hand rested across the lower chest. Over the right arm lay a large number of variously colored glass beads (AR 27883, Pl. 18, fig. 2). Sherds of a large, crudely made, double-mouthed pot (AR 27749, Pl. 22, fig. 2) occurred before the face. A smaller intact pot of Dutch Hollow Notched type (AR 27882, Pl. 27, fig. 4) containing half of a narrow ($1\frac{1}{16}$ inches) sheet brass bracelet (AR 27877) lay on its side near the knees. Beside this pot were the following objects: several hundred small discoidal and native wampum shell beads (AR 27884, Pl. 17, fig. 5), two irregular, naturally perforated stones (AR 27881), three perforated sheet brass disks (AR 27878, Pl. 12, fig. 16), a triangular flint arrowpoint (AR 27879, Pl. 7, fig. 18), and three large discoidal shell beads (AR 27880, Pl. 16, fig. 11).

The Dutch Hollow site, in keeping with Seneca towns of the early historic and later periods, was characterized by multiple cemeteries.[1] As already stated three large and two small burial plots have to date been discovered, and perhaps others remain to be found. The explanation of this custom is probably to be sought in the clan system of Iroquois society. Multiple matrilinearly related family units are known to have inhabited longhouse dwellings and such groups may also have been sequestered after death in separate cemeteries.

Of the eight or nine clans recognized for the Senecas of the Reservation period three, viz., the Deer, Beaver and Heron clans, are said by Fenton to have been added by the adoption of Huron captives following the fall of Huronia in 1649,[2] hence these would not have been present in Dutch Hollow

---

[1] This arrangement is foreshadowed on the late prehistoric and possibly proto-Cayuga Belcher or Allen's Hill site located about 8 miles southeast of Dutch Hollow. On a still earlier pre-Iroquoian level the dual cemeteries of the large Owasco settlement on the Sackett farm at Canandaigua come to mind (Ritchie, 1936, pp. 55-59).

[2] Fenton, 1940, p. 227.

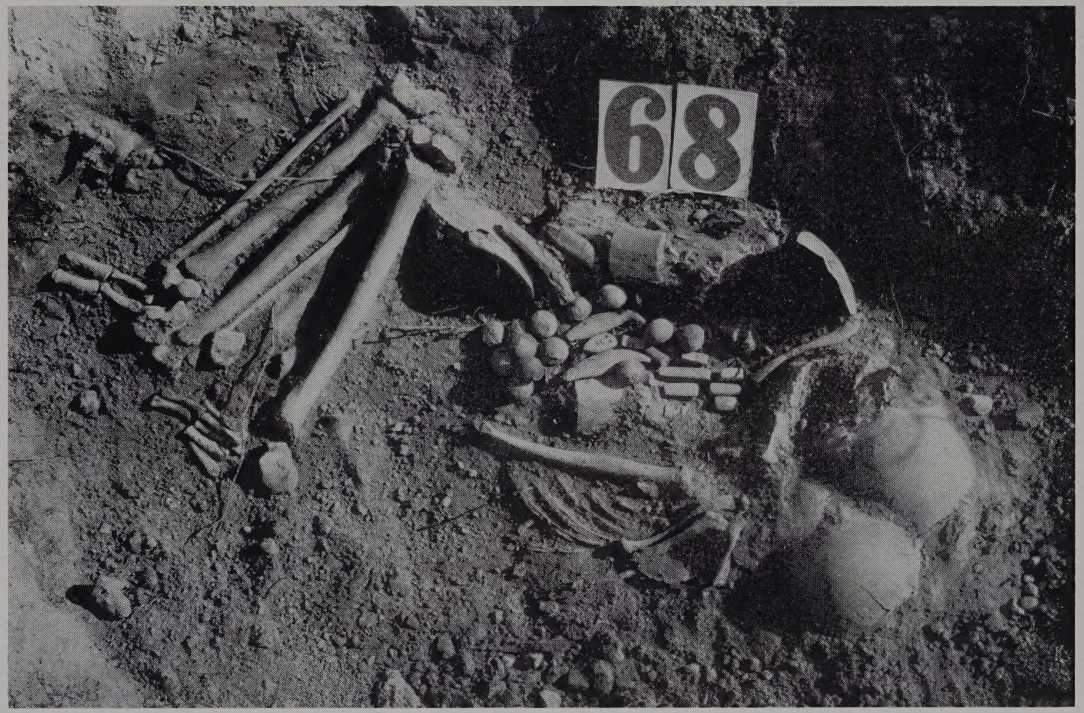


Plate 6. Child burial (No. 68) with numerous offerings placed over chest. Note wide brass bracelets (AR 27899) on both lower arms. Cemetery 1.

times. Possibly, therefore, the five cemeteries might represent some of the remaining Wolf, Bear, Turtle, Hawk, Sandpiper (Snipe) and Plover (Killdeer) clans.[1] However, as Speck points out, variability in the clan series was "brought about by time, separation, decline of native institutions, absorption, extinction of families, intermarriage among nations, and adoption of alien tribes having clan affiliations of their own—,"[2] and the furthest opinion one might venture at this time is the surmise of clan-cemetery association.[3]

Artifacts from the Dutch Hollow Site

No complete discussion is possible of the industrial remains of the Dutch Hollow people since most of the collections derived from the excavations of the refuse deposits are widely scattered and the data concerning some 50 graves found after 1934 by various individuals are unavailable. For this reason the trait table usually given in site reports will be omitted. The following discussion is based upon the mortuary equipment in the respective custody of the Rochester Museum of Arts and Sciences and Mr. Robert R. Hill of Rochester, supplemented to a minor degree by the small series of articles from the village refuse in possession of the two foregoing parties plus the New York State Museum.

The total material is readily divisible into native and European categories, and each group can further be subdivided in terms of usage and composition. Function is stressed in the following concise description of the objects, in which specific provenience is not usually mentioned, since this information is contained both in the condensed record of the burials (Tables 1-4) and in the plate captions.

The Dutch Hollow site is still sufficiently early in the historic period to yield a preponderance of native Seneca fabrications. Yet so swiftly did the process of acculturation advance that perhaps thrice the relative proportion of European to Indian devices occurs here as on the Adams site in the same county, whose founding is dated by Mr. Wray at approximately 40 years earlier, while on succeeding villages, only a generation or two removed from Dutch Hollow, foreign importations have come to outweigh goods of native make.

---

[1] Speck, 1945, p. 29.

[2] Ibid.

[3] The typological distribution of pottery by cemeteries tends to support this assumption; the qualitative differences appearing inconsequential, the quantitative variability as a function of the number of graves.

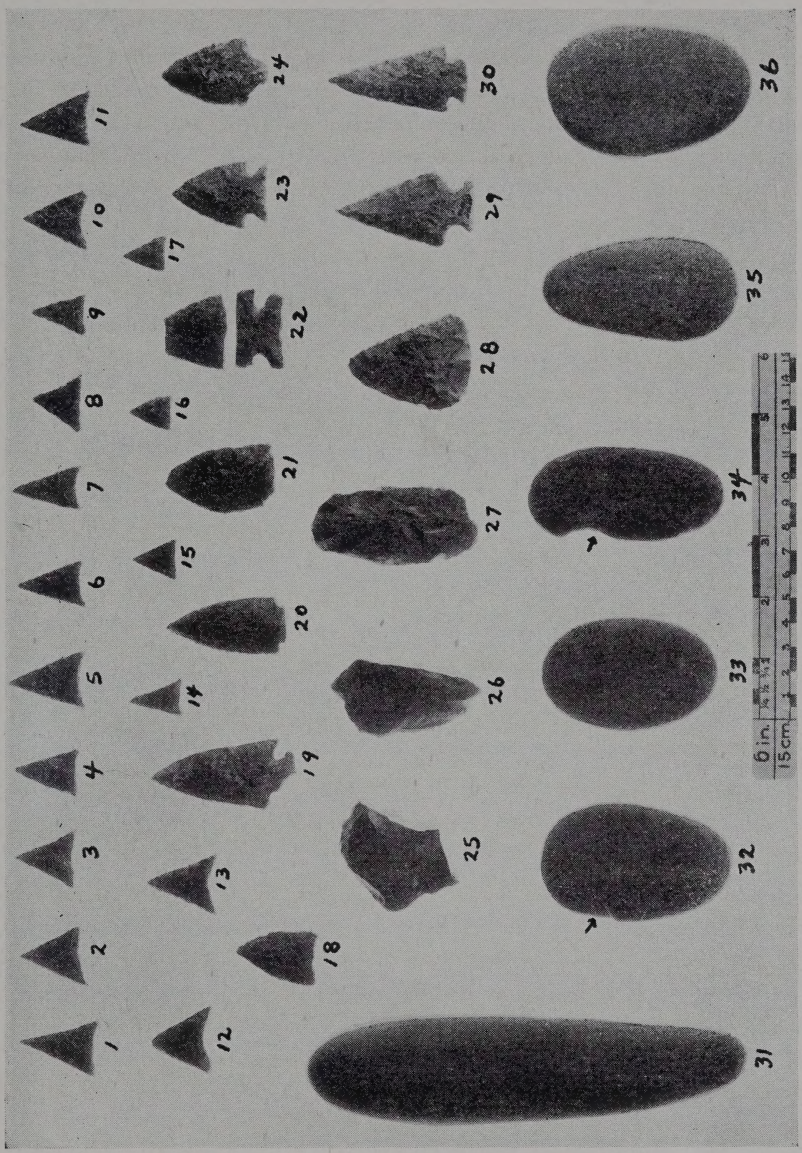


Plate 7. Chipped and rough stone implements from Cemetery 1. 1-18, triangular arrowpoints typical of the Seneca culture (AR 27856, 27808, 27804, 27814, 27846, 27759, 27879); 19-24, 29, 30, corner- and side-notched projectile points of Laurentian culture types (AR 27840, 27848); 25-28, flint quarry blanks and trianguloid knife (AR 27857, 27782, 27841); 31, thick, chisel-like implement (AR 27865); 32-36, flat pebble whetstones (AR 27805, 27863, 27824).

Provenience: 1-4, 23-26, 30, 33, 35, bur. 61; 5-9, bur. 45; 10, 11, 16, 32, bur. 43; 12, 15, 17, 34, 36, bur. 48; 13, 19-22, 28, 29, bur. 60; 14, bur. 14; 18, bur. 69; 27, bur. 36; 31, bur. 62.

Material: All chipped artifacts of gray Onondaga flint; others of sandstone.

Tools and Weapons of Stone, Bone and Metal

It is an established fact that prehistoric Iroquois industry in stone, whether chipped, polished or rough, was, in general harmony with other Late Woodland period manifestations, and in marked contrast with the majority of earlier cultures in the Northeastern area, subordinate to work in other media. The number and variety of artifacts fashioned from stone by the Senecas of the Dutch Hollow period is limited even more by the nearly complete replacement of the stone celt[1] by the iron axe and the large supercedence of the chipped flint knife blade by iron case knives.

As yet the gun was an unknown or unobtainable weapon and no suggestion of its use has been reported from the Dutch Hollow site. It was not to appear in the Seneca country until about 1630,[2] consequently the primary hunting and fighting weapon remained the bow and arrow, tipped for the most part with the characteristic small, thin, isosceles (less often equilateral) triangular point, chipped of regionally obtainable gray Onondaga flint (Pl. 7, figs. 1-18). Considerable numbers of these points have been found both in village refuse [3] and in graves. One such point, deeply lodged in the ulna of a deer, was picked up by the writer from a deep plow furrow in the habitation zone and is now in the Rochester Museum (AR 42364).

The sheet brass counterpart of the triangular flint point is present in very small numbers in the refuse (one specimen apiece in the Rochester and State Museums) but has not been reported from the graves on this station. It does not occur in appreciable numbers in Seneca town sites until about 1630. Apparently such points were, at least in the earlier period, cut locally with iron knives from sheet brass.

A single example of a conical antler arrowpoint with barb, of a type widely distributed among the Iroquois and their predecessors in the New York area, is depicted by figure 22 of Plate 9.

Chipped flint ovate and trianguloid knife blades, usually of infrequent occurrence even on prehistoric Iroquois sites, have but few representatives at Dutch Hollow (Pl. 7, fig. 28; Pl. 8, fig. 1). A unique discovery at the earlier Adams site comprised a blade similar to the latter still hafted, *point inward,* in a short wooden handle which was preserved by copper carbonate from contact with a brass object.[4]

Stone knives were evidently among the first tools to be replaced with the

---

[1] No examples of the stone axe came from the cemeteries, but one finely made trianguloid celt, oval in section, of tough green igneous rock, 4¾ inches long, 1⅞ inches in blade width, came from the surface of the village site and is in the Rochester Museum collections.

[2] Mayer, 1943, p. 57. Also from Seneca site chronologies of Mr. Charles F. Wray (personal communication).

[3] 145 in Rochester Museum from village area.

[4] Found by Mr. Charles F. Wray and in his collection at West Rush, N. Y.

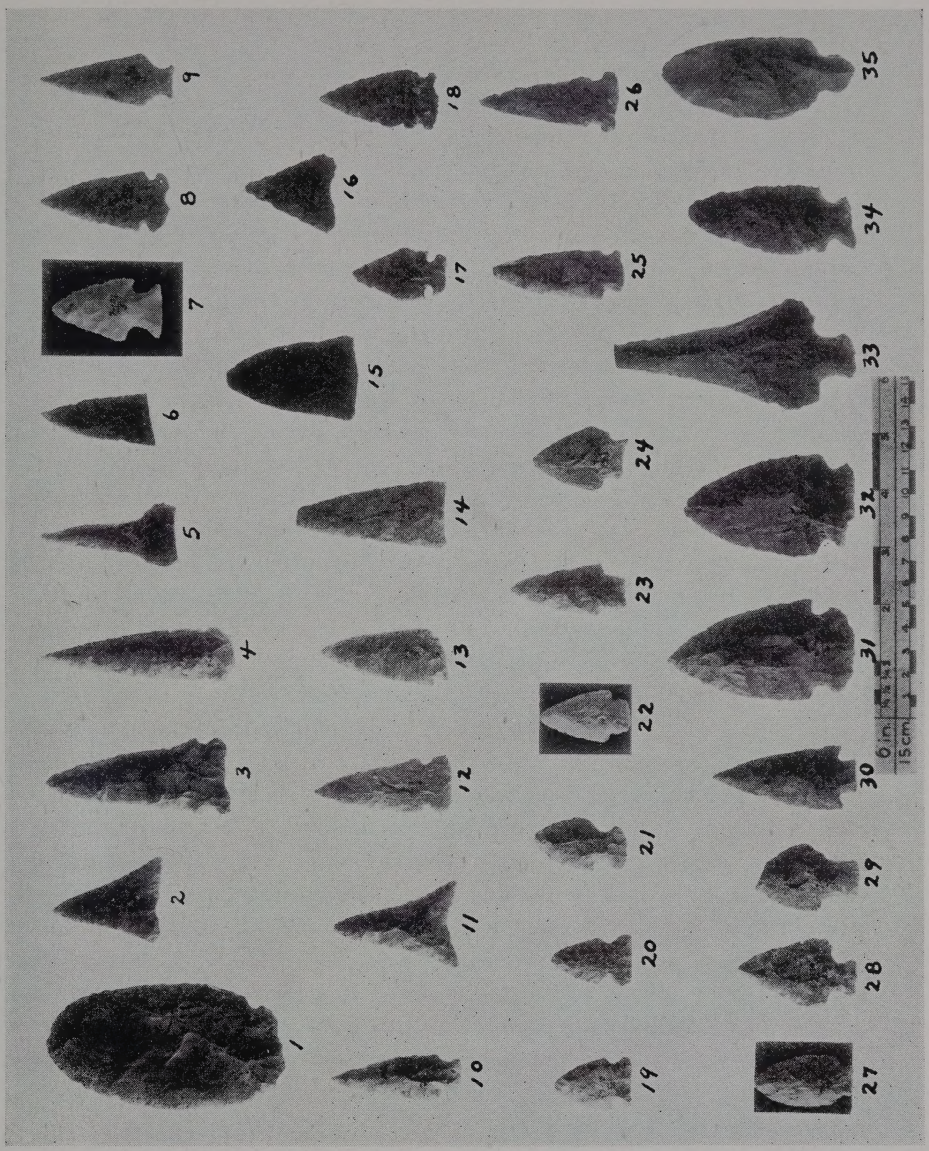


Plate 8. Pre-Iroquoian types of chipped stone implements from Cemeteries 2 and 3. Hill collection. 1, oval knife, probably of Seneca origin (7-50/2); 2, 11, 15, 16, broad triangular points of Owasco culture forms (7-50/3, 7-70/15, 7-39); 3, 4, 19-22, 34, side-notched points of Laurentian types (7-36, 7-70/20, 7-70/21, 7-70/18, 7-70/19, 7-70/4); 5, expanded base drill, Laurentian type (7-34/1); 6, 14, broken points (7-34/2, 7-70/10); 7, corner-notched point, Hopewellian type (7-102/5); 8, 12, 13, 18, 25, 26, side-notched points, typical of Point Peninsula 2 Focus (7-102/4, 7-70/14, 7-70/13, 7-21/1, 7-70/11, 7-70/12); 9, 24, semilozenge-shaped points, typical of Piffard and Point Peninsula 1 foci (7-102/3, 7-70/23); 10, side-notched point, Lamoka type (7-108/2); 17, side-notched pentagonal point, characteristic of Point Peninsula 3 and 4 foci (7-70/9); 23, 27-30, stemmed points, Laurentian type (7-70/17, 7-70/7, 7-70/22, 7-70/16, 7-70/8); 31, 32, side-notched spearheads or knives, Laurentian type (7-70/6, 7-70/3); 33, stemmed spearhead, Laurentian type (7-70/2); stemmed knife (?), Laurentian (?) type (7-70/5).

Provenience: 1, 2, bur. 50, Cem. 3; 3, 4, bur. 36, Cem. 3; 5, 6, bur. 34 (?), Cem. 3; 7-9, bur. 102, Cem. 2; 10, bur. 108, Cem. 2; 11-14, 17, 19-35, bur. 70, Cem. 2; 15, 16, bur. 39, Cem. 3; 18, bur. 21 (?) Cem. 3.

Material: All drab gray or mottled gray and brown Onondaga flint, probably from western New York sources, except 7, of Flint Ridge, Ohio chalcedony; 15, 16, black flint, source unknown; 22, 27, white-weathering flint, probably from local Silurian limestones; 24, rhyolite from south-central Pennsylvania.

more efficient iron case knives with wooden handles, illustrated on Pl. 14, figs. 11-13. Bone-handled knives, both plain and carved, and clasp knives, came later in the historic period.

The iron axe was another much sought Stone Age replacement during the first period of contact. In the Dutch Hollow period the early forms of felling axes current in western Europe in the sixteenth century were in use, rather than the lighter belt axe and tomahawk types which were introduced to the Seneca country after about 1650. The three varieties found in the graves and one example (like fig. 16) from the village area (Rochester Museum collection),[1] are pictured on Pl. 14, figs. 14-16. Figure 15, the heaviest, was the predominant kind.

For maintaining a keen cutting edge on trade knives, stone and iron axes, and probably the chisels or wedges of iron still to be mentioned, also for the sharpening of bone and metal awls, simple whetstones were employed (Pl. 7, figs. 32-36). These consist of flat sandstone pebbles, naturally shaped by erosion, the long edges or flat surfaces of which often exhibit wear, as seen particularly in figures 32 and 34 (arrows). Such pebble whetstones have exact parallels in the remote Point Peninsula horizon[2] and direct prototypes on precontact Iroquois sites in New York.

A series of scraping tools from the cemeteries and refuse at Dutch Hollow is shown on Pl. 14, figs. 1 to 4. Figure 3, a simple flint end scraper, is distinguished from a common form by the possession of a serrated working edge, a feature which occurs in about half the total of 11 examples (nine from the refuse). In a few instances the serration has been given to a straight, wedge-shaped edge, suggesting a saw rather than a scraper. The transference of this edge from stone to iron is revealed in the single known example shown as fig. 4, Pl. 14.[3]

Iron scrapers, or perhaps chisels, of a celt-like type (also having stone prototypes both Iroquoian and earlier) are portrayed on the same plate, figures 1 and 2. Only five or six tools of this kind came from the cemeteries.

What is perhaps a thick wedge or chisel for peeling bark or splitting wood is shown on Pl. 7, fig. 31. It is a naturally shaped elongate pebble with a narrow, ground, axe-shaped bit.

Awls or piercing tools employed in working leather and bark were fairly numerous on the site, especially in the village area. Most of them consist of native bone forms made from splinters of long bone, with or without smoothed edges, from deer ulnae, or from other mammal or bird bones with retained condyle, as shown in Pl. 9, figs. 14-16. The much scarcer copies in flat or rolled

---

[1] The large number of iron axes alleged to have been found here is certainly a gross exaggeration (Parker, 1922, p. 590).

[2] Ritchie, 1944, Pl. 56, figs. 8, 9.

[3] Serrated iron knives were found by Charles F. Wray in the middens of the apparently contemporaneous Factory Hollow site. (Personal communication from Mr. Wray.)

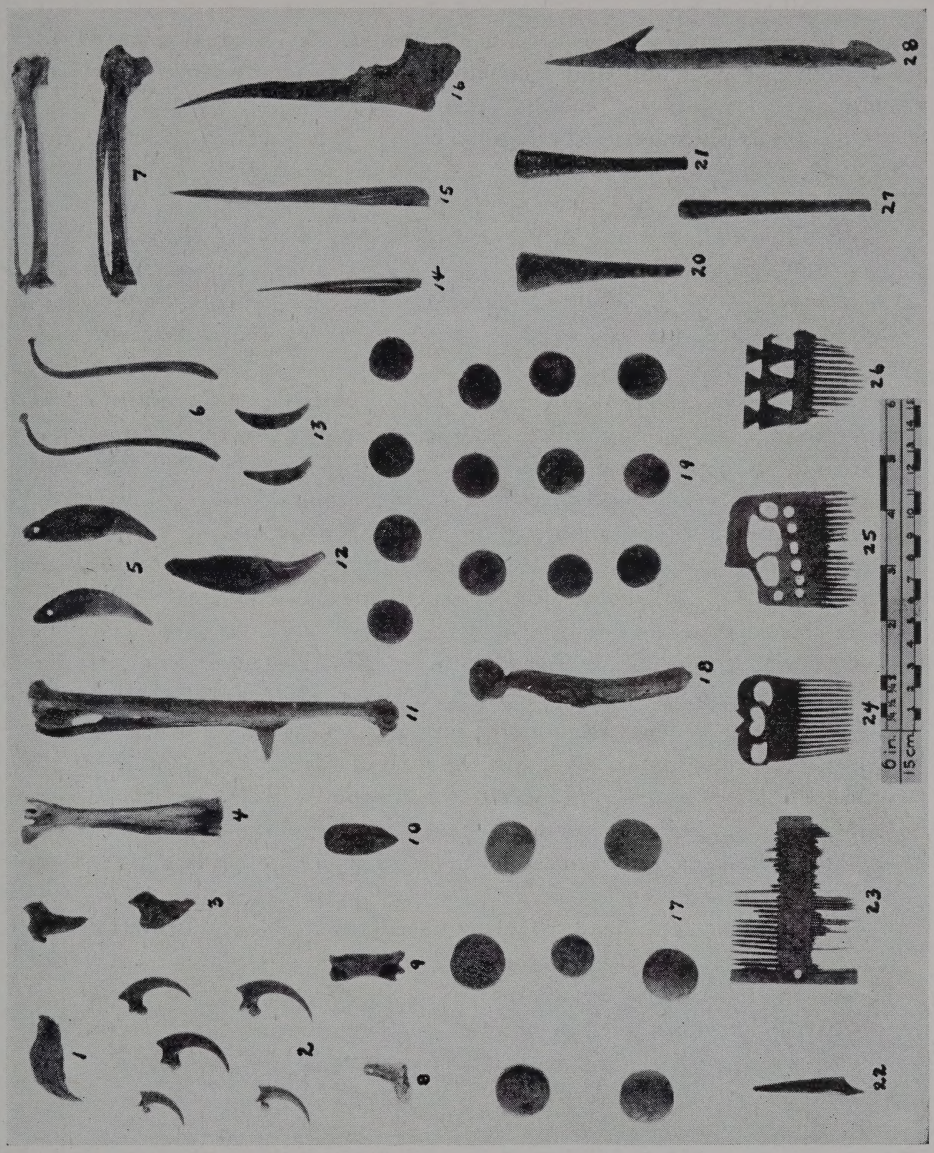


Plate 9. Bone and antler artifacts from Cemetery 1. 1, beak and 2, claw cores, probably of great horned owl (AR 27813, 27817); 3, claw cores of black bear (AR 27828); 4, tibia, probably of great horned owl (AR 27767); 5, perforated bear canines (AR 27789); 6, unworked penis bones of raccoon (AR 27893, 27905); 7, lower wing bones of wild turkey (AR 27818); 8, pendant in shape of human foot, made from bear molar (AR 19111); 9, perforated deer phalangeal bone (AR 18277); 10, antler maskette (AR 27889); 11, unworked tarsometatarsus of wild turkey (AR 42259); 12, imperforate bear canine (AR 27886); 13, imperforate dog canines (AR 27860); 14, 15, polished bone splinter awls (AR 18296, 18295); 16, deer ulna awl (AR 18297); 17, antler gaming disks (AR 27850); 18, antler gaming ball, in process of manufacture from beam of deer antler (AR 27887); 19, antler gaming balls (AR 27887); 20, 21, 27, antler flint-flaking tools (AR 27859, 18300, 27810); 22, barbed conical antler arrowpoint (AR 27815); 23, European bone comb (AR 27775); 24-26, antler effigy combs (AR 27898, 27855, 27750); 28, unibarbed antler harpoon (AR 27803).

Provenience: 1, 2, 7, 22, bur. 48; 3, bur. 49; 4, bur. 22; 5, bur. 38 b; 6 (left), 10, 12, 18, 19, 24, bur. 68; 6 (right), bur. 74; 8, 9, 14-16, 19, village refuse coll. Roch. Mus. Arts & Sci.); 11, bur. 55; 13, 20, 25, bur. 61; 17, bur. 60; 23, bur. 31; 26, bur. 5; 27, bur. 46; 28, bur. 43.

sheet brass and the iron trade awls may be seen on Pl. 13, figs. 4, 5 and Pl. 14, fig. 5. Figure 6 of the latter plate illustrates a wooden handle with a still imbedded iron awl base. Such metal awls were apparently replacing their native prototypes more slowly than in the case of knives and axes, probably because a stout and sharp bone point was nearly as effective as one of brass or iron.

The dominance of the hunting over the fishing activity among the New York Iroquois, which is attested by historical and ethnological sources, is archeologically supported by the great disparity in incidence of respective equipment, on most sites. No stone netsinkers or bone fishhooks and only one barbed antler harpoon point (Pl. 9, fig. 28) are recorded from the burials at Dutch Hollow. However, two single-barbed harpoon heads in process are in the collections from the village refuse, and others are said to have been found there, together with fishhooks.[1] The harpoon illustrated, with a single bold barb and expanded notched base, is distinctly of a post-contact type.

Antler tools presumably utilized in indirect percussion flint chipping, apparently the prevailing method among the western Iroquoian tribes, who also employed more stone projectile points than the Onondaga, Oneida and Mohawk, and extending back, with typological variations into Laurentian times in the same general area, were present in the village debris (total five) and in the graves. Of the two styles pictured on Pl. 9, figs. 20, 21, 27, the chronologically later variant with widely expanded striking head (figs. 20, 21), was the more numerous.

Not illustrated and represented by single finds in the refuse are the following native tool forms: a beaver incisor with chisel-shaped incisal edge, a split and perforated bear canine with enamel edges ground perhaps for use as a scraper or knife, a curved bone needle made from a strip of deer rib, and a trianguloid flint strike-a-light. A rude stone muller-like artifact and an elongate, pestle-like, erosion-shaped pebble without marks of use came from graves in Cemeteries 2 and 3.

Utensils

Except for seven brass kettles, all save one in very poor condition, and what may be cut fragments of others made into personal decorations and other artifacts, all Dutch Hollow utensils were of native manufacture. Undoubtedly wooden bowls and spoons were in general use, but due to their perishable character and the paucity of the protective brass kettles with which they are often associated on other stations after about 1630, only two partially preserved wooden ladles and a bowl fragment came to light.

---

[1] Parker, 1922, p. 590.

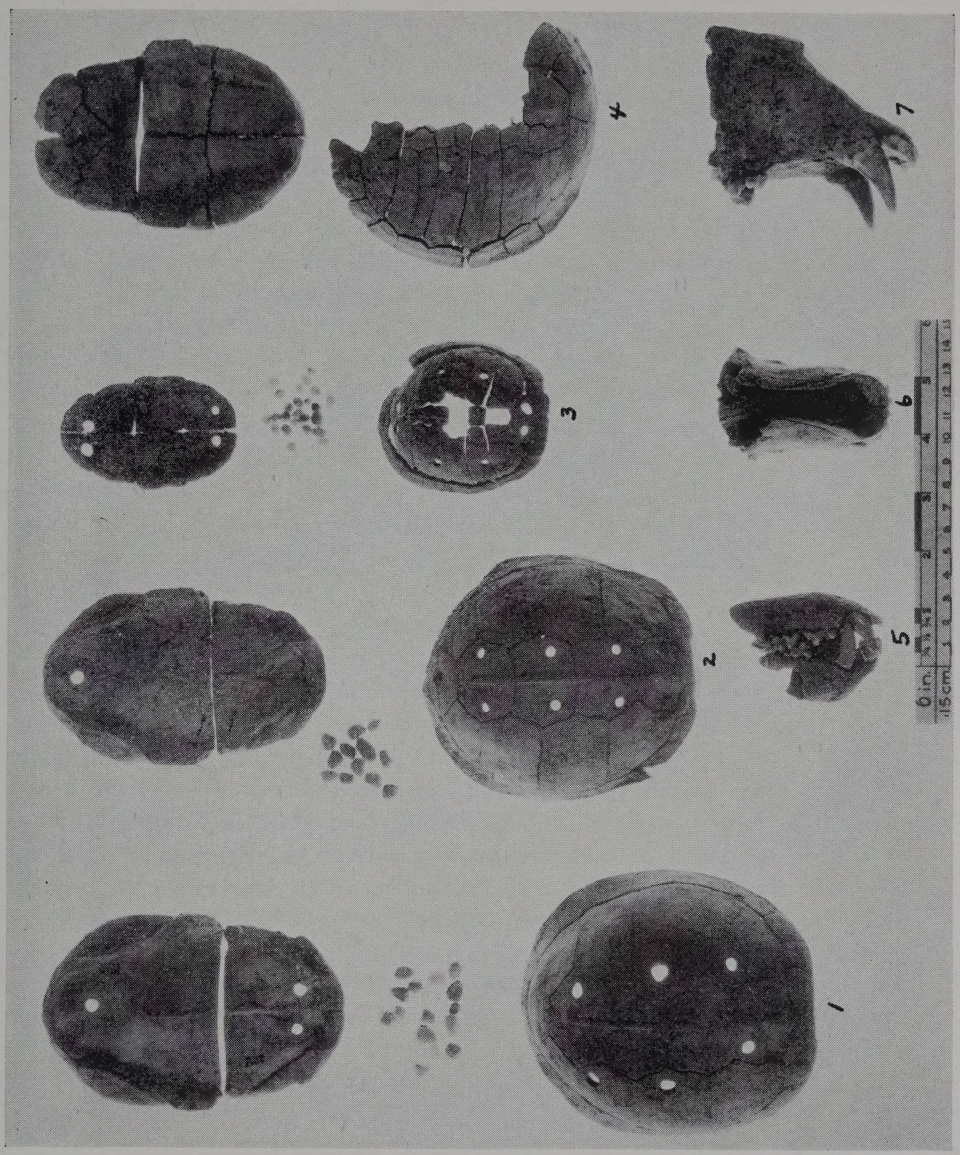


Plate 10. Bone artifacts from Cemetery 1. 1, 2, rattles made from box turtle shells (plastron above, carapace below, quartz pebbles in between) (AR 27914, 27811); 3, rattle, probably from immature box turtle shell (AR 27869); 4, turtle shell of unidentified species, imperforate and without pebbles (AR 27807); 5, anterior maxillae of large dog (AR 27780); 6, cut anterior maxillae of wolf (AR 27791); 7, cut anterior superior maxilla of bear (AR 27832).

Provenience: 1, bur. 56; 2, 7, bur. 47; 3, bur. 67; 4, bur. 44; 5, bur. 36; 6, bur. 38.

Of pottery vessels, however, there is an impressive series amounting to 114 pots taken from the graves, often in an intact condition and even when crushed by earth pressure or the weight of rocks laid over the bodies, usually in a restorable state. Although the village refuse is stated to have teemed with potsherds, relatively few were saved by the earlier diggers, and even of these the quantity at hand for study is adequate only to illustrate the important point that no special mortuary ceramic types were employed, despite the fact that many of the grave pots now show no evidence of utilitarian usage. A small proportion do, however, exhibit the interior (and in a few instances also exterior) black incrustation believed to have resulted from grease accumulation (see Pl. 27, fig. 2). Hence it does seem probable that while no special styles were devoted to the purpose, new pots of familiar kinds were often made as grave goods. The occurrence of asymmetric and rather poorly fired vessels with the burials tends to sustain this assumption.

Insofar as can be judged, all the pottery was moulded rather than coil built, presumably after the fashion described by Sagard for the Hurons.[1] Absolutely no trace of coil fracture planes has been noted either by Mac Neish[2] or the writer on any of the sherds from this or other Seneca sites.

Because in several instances animal bones found in the grave vessels suggest food offerings it may be surmised that in general the included pots, although found empty, originally contained food of a readily perishable nature or perhaps water. The few instances where beads or other objects occurred inside, and particularly where a smaller pot was encompassed within a larger vessel, may mean that sometimes the utensils alone were provided. However, small articles found within may fortuitously have come there in the course of the decay and settling of the grave contents. The finding of articulated leg bones of deer, and skeletons of ducks, turkeys and smaller birds and mammals with human skeletons, apparently implies the inclusion of meat offerings, while the more frequent occurrence of compact masses of berry seeds[3] suggests that vegetable foods,[4] and surely berries, doubtless in the form of dried fruit or "berry cakes," were also commonly provided for the use of the deceased.[5]

---

[1] Sagard, 1939, p. 109.

[2] MacNeish, 1952, p. 7.

[3] Samples kindly examined by Dr. Eugene C. Ogden, State Botanist, were identified as pits of the genus *Rubus* which includes the raspberries and blackberries, known to have had native wild species in New York.

[4] Cherry and plum pits and the seeds of a *Cucurbita* (burial 67, Cemetery 2) are also recorded.

[5] Parker (1910), states that the Iroquois dried blackberries, black raspberries, huckleberries and blueberries for winter use (p. 96) and that "for making an expedition food berries were pounded with meat, parched corn and sugar" (p. 97). Waugh (1916) mentions that berries to be preserved by drying were sometimes "mashed and afterwards placed in 'small cakes' upon large basswood leaves to dry" (p. 127).

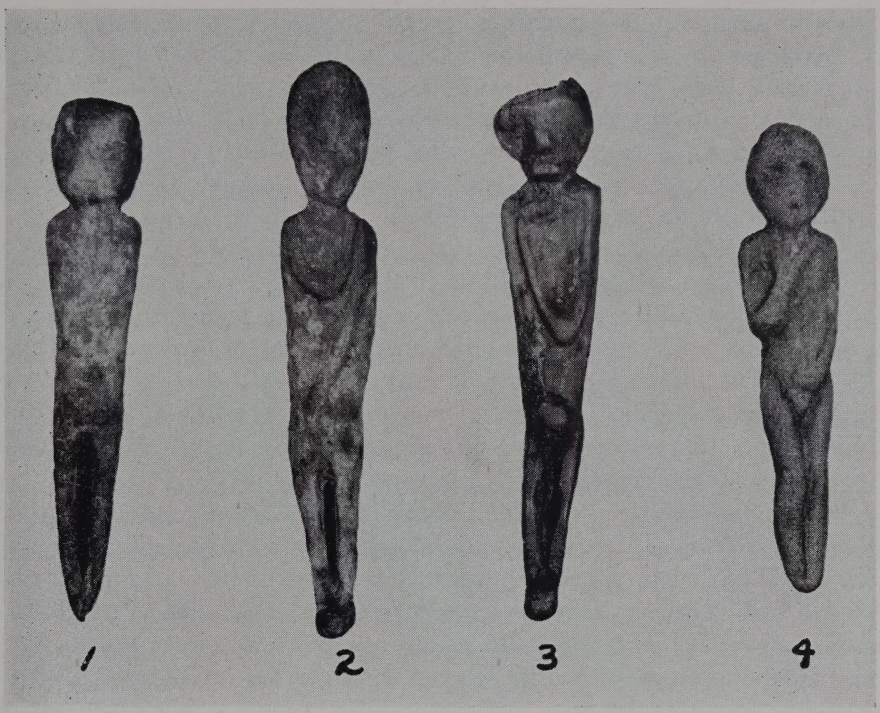


Plate 11. Antler figurines from Cemetery 1. 1, 2, perforated transversely through neck, from burial 67 (see Plate 5) (AR 27872, 27871); 3, imperforate, from burial 69 (AR 27876); 4, perforated transversely through neck, from burial 41 (AR 27802). Length of 2 is 3 inches.

Ceramic Typology

The recent publication of MacNeish's study of Iroquoian pottery[1] makes it possible to discuss, in terms of his designated types, and without recourse to detailed description, the clay pots from the Dutch Hollow site. With a few exceptions, to be noted later, typological identification of the 114 pots from the five cemeteries[2] can be made with confidence, while for brevity the essential data concerning this aspect of the report are summarized in Table 6 (pp. 97-98).

In the interpretation of this material I have relied upon MacNeish's conclusion with respect to the cultural and temporal significance of his adduced types.

In the first place, it will be seen that 66 or 58% of the grave pots pertain to the several types which apparently had their principal development, if not

---

[1] MacNeish, 1952.

[2] One Seneca Barbed Collar pot is from burial A in the village area.

also their origin, in the hands of the Senecas, viz., Long Point Nocked (total five), Long Point Horizontal (three), Seneca Notched (ten), Dutch Hollow Notched (17), and Seneca Barbed Collar (31). The relative scarcity of the Long Point forms is perhaps explicable on the grounds that these types reached their zenith at a somewhat earlier period in Seneca history. Obviously the dominant forms of the Dutch Hollow period are the remaining three types, especially the Seneca Barbed Collar, which alone accounts for about 47% of the Seneca types.

Thirteen designated types and the small untyped remainder of the series (six pots),[1] comprising in all 48 vessels or 42% of the total group, seem not primarily to be of Seneca derivation, but rather to represent more characteristic styles of neighboring Iroquoian tribal groups, viz., the Huron-Wenroe, Neutral-Erie, Cayuga or Andaste-Cayuga, and Onondaga-Oneida, with the largest proportion of the pots representing the groups most closely adjoining the Seneca on west and east.

Following customary precedent in such cases, MacNeish has referred to these as "trade pots,"[2] with the implication that they were carried or bartered into the Seneca country. Perhaps this explanation is a sound one, some of the vessels repesenting the direct or indirect results of trade, such as I shall adduce evidence in support of in a later section. Some may record the work of captive women absorbed into the local social group, for while Dutch Hollow doubtless antedates the period of the so-called Iroquoian Wars, beginning about 1640, there are strong historical reasons for the belief that intertribal discord was the rule rather than the exception, even prior to the rivalries engendered by the fur trade.[3]

The Jesuit Relation of 1656-57 has the statement that Iroquoian villages, as the result of long continued warfare and the practice of adopting captives, then contained "more foreigners than natives of the country," there being no fewer than eleven different nations represented among the Senecas.[4]

There is, however, another possible explanation to account for the phenomenon of so large a percentage of presumably foreign pot styles both at

---

[1] These aberrant forms embrace two double-mouthed pots probably of Andaste inspiration, illustrated on Plate 22. A few others are known from Seneca and Cayuga sites of the period 1630-1650.

Plate 25, figure 1, is the smallest of four untyped vessels characterized by parallel oblique collar incisions, bordered above and below by notches or punctations along the collar edge. Because a number of sherds of this kind were seen in the collection of Robert R. Hill from the probably early historic period Lawrence site near Pompey Center, Onondaga County, New York, these pots may tentatively be assigned to the same source as the Thurston Horizontal type.

[2] MacNeish, 1952, pp. 25, 50, 51.

[3] Hunt (1940, p. 8) says that previous to 1653 there is no record of unanimous action by the League of the Iroquois and none save in peace treaties thereafter. "Rarely did two of the cantons combine in attack, and then only because their commercial interests were for the time being identical. Never did two cantons combine for defense." ". . . much Iroquois blood was spilled by Iroquois, and perhaps more embassies of peace traveled within Iroquoia than from Iroquoia to foreign tribes."

[4] Thwaites, Vol. 43, p. 265.

Dutch Hollow and at the still earlier Adams site. This explanation takes cognizance of the small size and number of what seem to be Seneca sites of the prehistoric period. These do not include the still controversial series of fortified stations in the Genesee drainage area reaching from Allen's Hill (Belcher site) and Richmond Mills (Reed site), in Ontario County to Wellsville in Allegany County. While some of these sites are so little known that cogent comparisons are still impossible, others, like the two first mentioned, plus the Portageville or Blue Stone and the Dansville forts, are regarded by MacNeish, in his *in situ* theory of Seneca and Cayuga cultural development from the Canandaigua Focus of the Owasco Aspect, as probably proto-Cayuga rather than Seneca.[1] The materials from all four are sufficiently similar to establish a definite relationship. Parker considered the Reed site, the largest of this clearly related series, to be of prehistoric Seneca provenience,[2] Houghton vacillated in his opinion, offering the suggestion that this station and a smaller site at Clifton Springs, farther east in the same county, might represent a westward movement of a part of the Onondaga.[3] Obviously a great deal of intensive study still remains to be done on this whole problem.

Several of the cemeteries on the small, apparently open, and presumably early or proto-Seneca sites, on which no refuse accumulations occur other than those in occasional pits, have been excavated, particularly in the Genesee Valley between Henrietta and Geneseo, by Charles F. Wray, the writer, and others. Grave offerings are extremely rare, comprising an occasional trumpet pipe, plain, slightly ornamented with incisions or linear punctuations, or very rarely embellished with a human face effigy; bar celts; a few bone tools, such as awls and fishhooks; and personal ornaments, chiefly bone beads and pendants made from the epiphyseal caps of deer femurs, all traits which continue into historic period Seneca components.

A detailed study of a series of 24 adult crania from such cemeteries, particularly from the Markham site, near Avon, excavated by Mr. Wray and the LeBar site at Cold Water, near Rochester, excavated by the writer for the Rochester Museum, was made by Dr. Georg K. Neumann and the writer at the Rochester Museum in June, 1949, and the results were compared with various other cranial series, including those from the Dutch Hollow and Adams sites. Whereas the prehistoric and presumably Seneca population consisted solely of dolichocranials of Neumann's Lenapid variety,[4] several other morphological varieties were found to occur in the early historic period cemeteries. Thus of the Adams series of 16 males and 15 females,

---

1 MacNeish, 1952, pp. 39, 41, 47.
2 Parker, 1918, p. 40.
3 Houghton, 1922, p. 45.
4 Neumann, 1952, pp. 23-25.

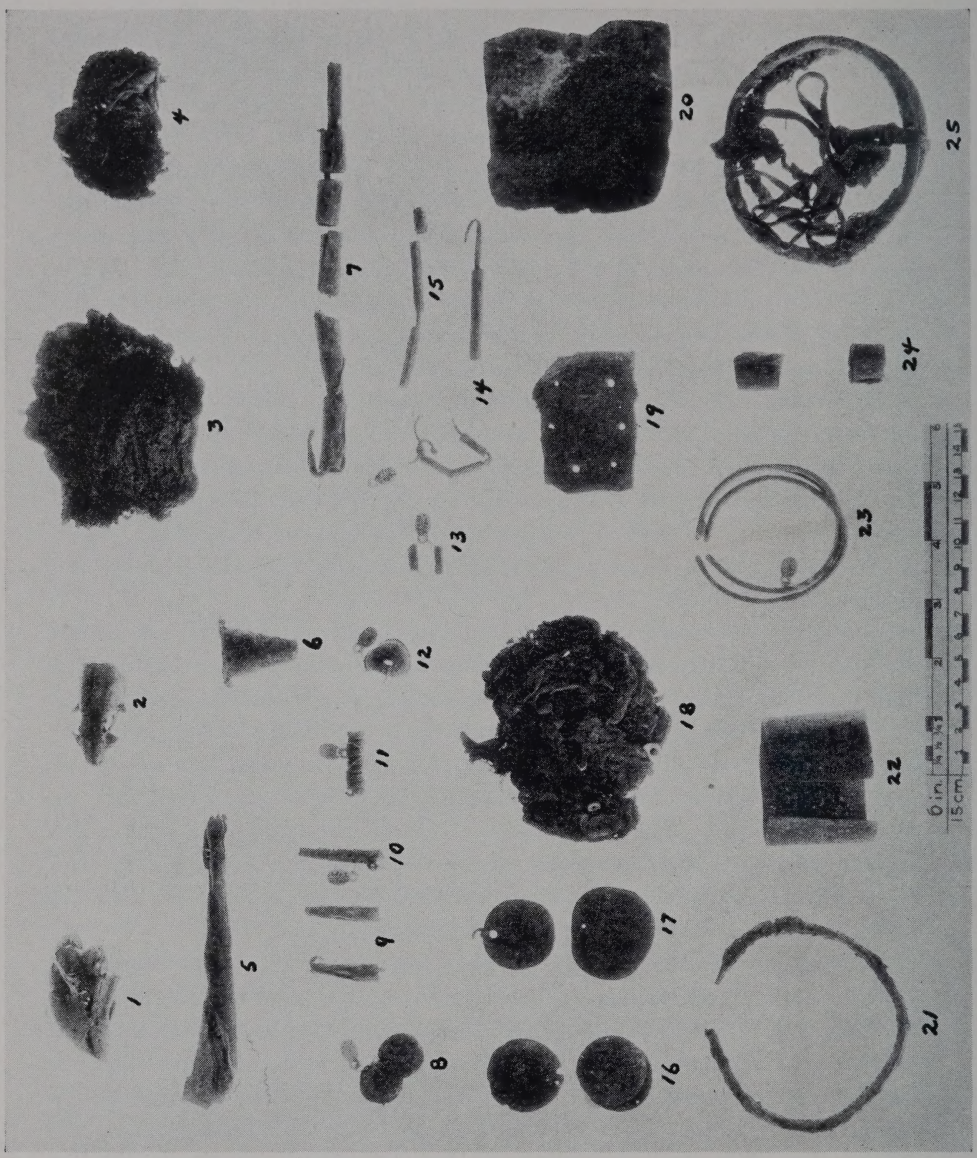


Plate 12. Brass ornaments and other artifacts from Cemetery 1. 1, beak, probably of great horned owl (AR 27813); 2, skull of weasel (AR 27851); 3, bark and leather found under medicine bag (fig. 18) (AR 42265); 4, medicine pouch of leather thongs containing shell, glass and brass beads and scraps of fur (AR 27901); 5, feather fan handle (?) of sheet brass (AR 27821); 6, sheet brass lining of wooden pipe bowl (AR 27777); 7, 13-15, tubular brass beads on leather thongs (AR 27894, 27847, 27754, 27909); 8, 16, 17, discoidal pendants of sheet brass (AR 27849, 27878, 27906); 9, 10, conical fringe ornaments (?) of sheet brass (AR 27754, 27847); 11, spiral brass wire ornament on leather thong (AR 27907); 12, portion of brass hawk bell (AR 27888); 18, braided leather medicine bag containing sheet brass scraps, shell and glass beads, and bits of fur (AR 27900); 19, multiperforated piece of sheet brass (AR 27816); 20, cut rectangle of sheet brass (AR 27892); 21, iron wire bracelet (AR 27858); 22, sheet brass bracelet (AR 27771); 23, brass wire bracelet (AR 27776); 24, sheet brass finger rings (AR 27908); 25, brass and leather breast (?) ornament (AR 27830).

Provenience: 1, 5, 19, bur. 48; 2, 8, 10, 13, bur. 60; 3, 18, bur. 70; 4, bur. 73; 6, 23, bur. 31; 7, 12, 20, bur. 68; 9, 14, bur. 5; 11, 15, 17, 24, bur. 74; 16, bur. 69; 21, bur. 61; 22, bur. 26; 25, bur. 51.

Lenapids comprised 35.5% of the males and 38.7% of the females (total 74.2%), Otamids[1] 12.9% of males, 9.6% of females (total 22.5%), and there was one Walcoloid[2] male. The Dutch Hollow group of 18 skulls, evenly divided between the sexes, showed an even higher percentage of the second long-headed Otamid type (55.5% males, 100% females). Only two were Lenapids, one was a brachycranial Walcoloid, and a single example of a new broad-headed variety, the Deneid,[3] also occurred.

Unfortunately, the series from all these sites are small and comparative data for other Iroquoian groups both within and without New York is lacking due in large part to the average collector's disregard for skeletal remains, hence a conclusive evaluation of the evidence at hand is not now possible.[4]

A Cayuga group of four males and six females of the historic period (c. 1670) excavated by the writer for the Rochester Museum on the Rogers site in northern Cayuga County, was found to be 100% Lenapid. Both Lenapid and Otamid types characterized a series of ten Seneca crania from various historic period sites (c. 1650-1750), included in the same study, and three post-contact period Oneida males were placed by Neumann in the Walcoloid group, which he believed also was prevalent among the Andaste. On the immediate pre-Iroquoian level, the Otamid and Lenapid varieties predominate in the total Owasco series (Canandaigua and Castle Creek foci),[5] a fact which tends to support MacNeish's hypothesis.

While the picture is still far from clear, it is evident that both Otamid and Lenapid varieties were already present in a mixed population in Owasco times. The prehistoric Seneca from the two sites considered in our study were, rather inexplicably, all Lenapids. This type still predominated on the Adams site, of the earliest known historic period, but on the somewhat later Dutch Hollow station it had been largely replaced by Otamids and two brachycranial varieties. Thus we may tentatively affirm that with the beginning of historic times or around 1550, the more or less isolated, inbred and numerically unimportant, scattered Seneca groups whose remains have been found over most of the general territory claimed by their descendants,[6] were augmented by new ethnic increments. On the basis of the prevalence of pottery types introduced at this period, it would appear that the first influx came from west of the Genesee Valley, from the Neutral-Erie, and to a lesser extent, the Huron-Wenroe. By Dutch Hollow times, at least, connec-

---

1 Neumann, 1952, pp. 15-17.
2 Ibid., pp. 21-23.
3 Ibid., pp. 27-29.
4 For an important exception, see Knowles (1937), in which, however, comparable data are lacking.
5 Earlier described by Ritchie, 1944, pp. 100-101.
6 Fenton, 1940, fig. 11. One cemetery of this kind was explored by the Rochester Museum under the writer's supervision at Dresden, on Seneca Lake.

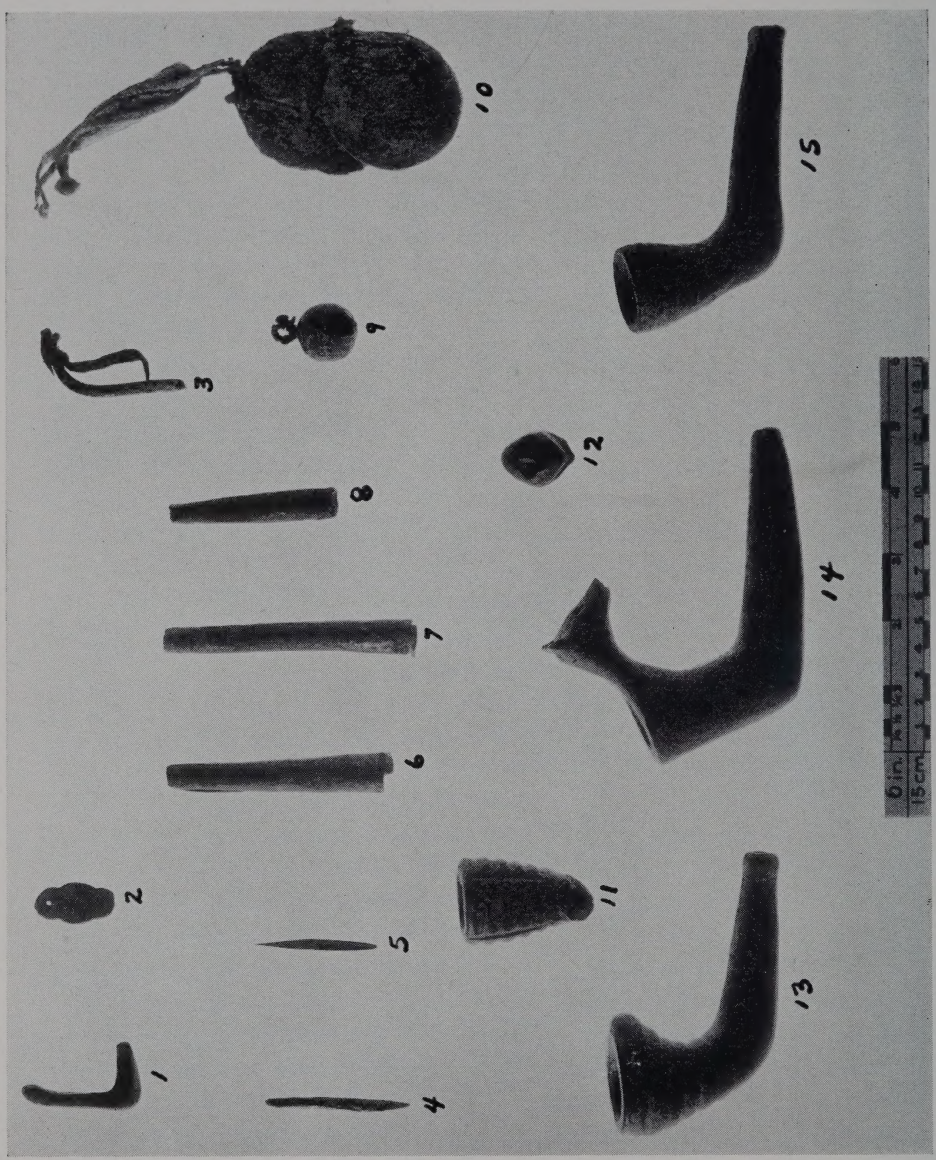


Plate 13. Various artifacts from Cemeteries 2 and 3. Hill collection. 1, natural claystone concretion, grooved at top for pendant (?) (7-76/3); 2, thin, flat, shale pebble pendant (7-76/2); 3, undecayed portion of os penis of raccoon, with attached leather thong (7-101/23); 4, 5, brass awls, round and flat, respectively; 6-8, conical sheet brass fringe ornaments (?) (7-42/1-3); 9, brass hawk bell, leather-wound attachment (7-8/1); 10, neck ornament made from 3 brass disks suspended on leather thongs (7-101/12-15); 11, shell tempered pottery pipe bowl; 12, human face effigy, apparently from pottery pipe bowl; 13, snake effigy pottery pipe (7-114/1); 14, bear (?) effigy pottery pipe; 15, ring-bowl pottery pipe (7-78/10).

Provenience: 1, 2, bur. 76, Cem. 2; 3, 10, bur. 101, Cem. 2; 4, 5, 11, 12, surface finds on village site; 6-8, bur. 42, Cem. 2; 9, bur. 8, Cem. 3; 13, bur. 114, Cem. 2; 14, bur. 12, Cem. 2; 15, bur. 78, Cem. 2.

tions with the Cayuga and Andaste-Cayuga to the east and southeast, respectively, seem, on ceramic grounds, also to have been well established, and there are similar, but weaker Onondaga-Oneida linkages. At no period, however, are Mohawk connections in evidence.

The dual and concomitant processes of physical and cultural assimilation which seem attested in the light of current knowledge probably took place through infiltration and acculturation, rather than by conquest, either on the part of the Senecas or the outsiders, since there is no sudden replacement or major shift in the composition of the population or ceramic styles. However, insofar as I can see, the factor of chronic, small-scale intertribal warfare, with adoption of captives, cannot be ruled out.

In my opinion the main element of doubt concerning this hypothesis, lies in the still unknown relationship existing between the small, apparently open settlement and cemetery sites and the chain of hilltop forts previously referred to. Were the dwellers in the palisaded towns Iroquoian invaders who, on the threshold of the historic period, consolidated and assimilated the resident scattered local groups of proto-Seneca, who may have been descendants of the Owasco people in the same area? Do these hilltop towns represent the slow persistent northward movement of two kindred groups which were to bifurcate in Ontario County to further differentiate as the Cayuga and Seneca, respectively? A parallel dual line of movement and development for the Seneca themselves has been postulated by Houghton[1] and apparently, with modifications, been sustained by the later evidence of Wray[2] and others.

Personal Ornaments of Native and European Origin

The large volume and variety of articles of personal adornment from the Dutch Hollow site testify to the advanced status of this phase of the prestige complex among the Senecas at this time. That it defines no novel psychological development is shown by the persistence of decorative elements from precontact times, viz., bone beads, bone and stone pendants, shell ornaments (to some extent), deer phalangeal cones, perforated mammal teeth, and antler combs. However, the evidence from earlier cemetery and settlement sites would seem to indicate a relatively weak expression of personal embellishment prior to the ability to obtain European items. Accordingly, we might conclude that the instigation of trade relations which opened up a new channel of wealth quickly and vigorously stimulated an extant but relatively undeveloped interest.

---

[1] Houghton, 1922, pp. 41-64.
[2] Wray and Schoff, 1953.

The flood of trade beads which came into the Seneca country during the 15 years or so which intervened between the close of occupation at the Adams site and the establishing of the Dutch Hollow village is in part recorded at the Cameron site. It seems to have been attended by a waning interest in, but not complete replacement of, the older native devices, some of which, perforated animal teeth, for example, persist into the post-Denonville period.

At Dutch Hollow the following native bead types occurred in small numbers with the dead; they are also reported, but in quantities unknown, from the village refuse: tubular beads, made from the long bones of various large birds, chiefly the wild turkey, (Pl. 16, figs. 3, 12); large, rectangular, red slate beads (Pl. 15, fig. 2), and one of gray steatite, flattened on two sides, 1⅝ inches in length, from the village area (State Museum collection); massive shell beads, made from the conch columella (Pl. 15, fig. 3); perforated canine teeth of the elk (Pl. 17, fig. 2), dog, wolf (Pl. 16, fig. 3), and bear (Pl. 9, fig.5), all of which are also represented in the Museum collections from the village area. Of particular interest, from the latter source, is the bear molar with one root detached, the other perforated, to create the semblance of a human foot, shown in Pl. 9, fig. 8. This quite specific trait is a diagnostic marker for the Richmond Mills and related sites.[1]

Considerably more numerous among the native made beads than those of bone and stone, are the discoidal and wampum beads of shell. The former occur in two diameters, large and small, both apparently made from marine shells, and are illustrated, respectively, in Pl. 15, figs. 4, 7; Pl. 16, figs. 8, 11, 13, 16, and Pl. 17, figs. 4, 5. One very large and thick example from the refuse, one inch in diameter, three-sixteenths of an inch thick, is in the State Museum. Beads of this kind have been found on the Richmond Mills site and they are also present in the early historic Erie site at Ripley, N. Y.[2]

All the wampum found on the site is indubitably of Indian manufacture, as the lack of uniformity in all respects indicates. It is of fair abundance in the graves. The length range is from about one-eighth to one-half inches (Pl. 15, fig. 7; Pl. 17, figs. 4, 5; Pl. 18, fig. 3).

Great variability characterizes the glass beads, all of which are, however, cane made. They range from large "star beads"[3] (Pl. 15, fig. 3, bottom center), through sundry styles of polychromes (e.g., Pl. 15, figs. 1, 3, 5) and single color (e.g., Pl. 18, fig. 2) spherical, oblate spheroidal and elliptical forms, to small "seed" beads (e.g., Pl. 17, fig. 3).[4] While a very small number of a twisted elongate type, rectangular in cross section occurred (Pl. 17, fig. 1), cylindrical forms were not in evidence, another proof along with the predominance of polychrome styles, that Dutch Hollow pertains to the early, rather than to the middle historic period.

I am much indebted to Mr. Kenneth E. Kidd of the Royal Ontario Museum of Archaeology for the further description which follows.

---

1 Parker, 1918, Fig. 12, 3, 4.
2 Parker, 1907, Pl. 14.
3 Orchard, 1929, pp. 83-84, Pl. XII.
4 This is a rather confusing term widely applied by collectors to the small spheroidal multicolored glass beads which appear in considerable numbers a little before the Dutch Hollow period and increase in incidence with time.

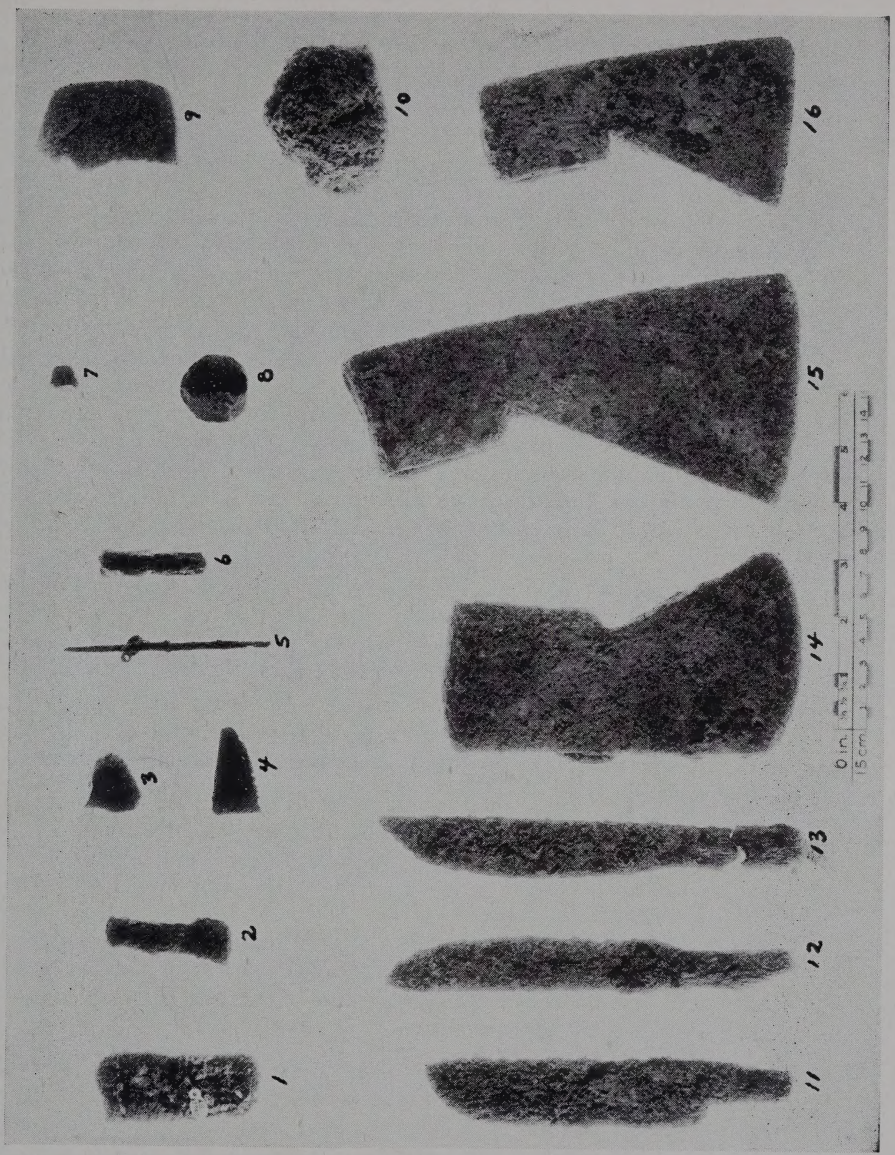


Plate 14. Iron and stone tools and paintstones from Cemetery 1. 1, 2, iron scraper or chisel blades (AR 27783, 27829); 3, serrated flint end scraper (AR 27799); 4, serrated iron end scraper (AR 27800); 5, iron awl (AR 27781); 6, wooden handle for iron awl (AR 27897); 7, 8, graphite paintstones (AR 27842, 27861); 9, hematite paintstone (AR 27768); 10, limonite paintstone; 11-13, iron case knives (last two retain remnants of wooden handle) (AR 27823, 27854, 27839); 14-16, iron axes (AR 27913, 27853).

Provenience: 1, 5, bur. 36; 2, bur. 51; 3, 4, surface finds on village area; 6, bur. 68; 7, 13, 15, bur. 60; 8, 12, bur. 61; 9, bur. 22; 10, bur. 38 c; 11, bur. 48; 14, bur. 75; 16, bur. 55.

Glass Trade Beads from Dutch Hollow

by KENNETH E. KIDD

The glass trade beads from Dutch Hollow represent a fragment of those which were poured into the hands of the Senecas by the French and the English during their long courtship of the Five Nations. A cursory inspection of the whole series leaves the impression that during this long period stylistic changes were numerous. In fact, the best available series for the Five Nations as a whole (if not for a vastly larger geographic area than the Iroquois habitat) is derived from Seneca territory. Local archeologists, of whom C. F. Wray of West Rush is outstanding, have attempted a chronology of the Seneca sites, and it is upon the consensus among them that any classification must stand at present. It may err in detail, but it is doubtful if it is wrong in any of its major assumptions. However, the point is mentioned here for this reason: the dating of beads in this area is currently based on internal evidence, whereas the ideal would be to use external evidence, which is not yet available. Any conclusions reached must be regarded with this in mind.

In the presently accepted chronology, then, Dutch Hollow is placed about third in the historic sequence, with only the Adams site (including the Tram site) and Cameron earlier. It is believed to be coeval with Factory Hollow, and earlier than Warren, Powerhouse, Dann, etc.

The beads from Dutch Hollow may be characterized as small and round. The most striking exceptions to this are the tubular beads (Pl. XVII, fig. 1), a type which begins to appear here but becomes dominant at later sites such as Dann.

Star Beads. One of the first types to be introduced to the Indians, the star (or chevron) varies greatly in size and shape, and from place to place. At Dutch Hollow it is either fairly large, as in Pl. XV, 3, or small (XVI, 1). They occur chiefly in blue and white, the extent to which the bead has been ground to shape greatly altering the pattern which shows on the surface. In Pl. XV, 4, for example, the beads have been ground very little on the sides so that the latter are striped but the ends show the star effect.

Melon Beads. Conceptually very much like the star beads are the "melon" beads, provisionally so-called. These are specimens having a body of a solid colour, such as red or blue, into which have been laid strands of one or more contrasting colours (Pls. XV, 1, 3-7; XVI, 1, 2, 4, 6; XVII, 2; XVIII, 3). Frequently the inlaid stripe is bordered with white or some other colour which sets it off from the background so that most of these beads show at least three colours. For instance in Pl. XV, 3, there are beads with red ground and a blue stripe bordered with white, a red stripe bordered with white, and a white stripe bordered with black. A few have simply one inlaid and contrasting colour, without a border, as seen in Pl. XV, 1. Others again have enough stripes of inlay to cover one half the surface of

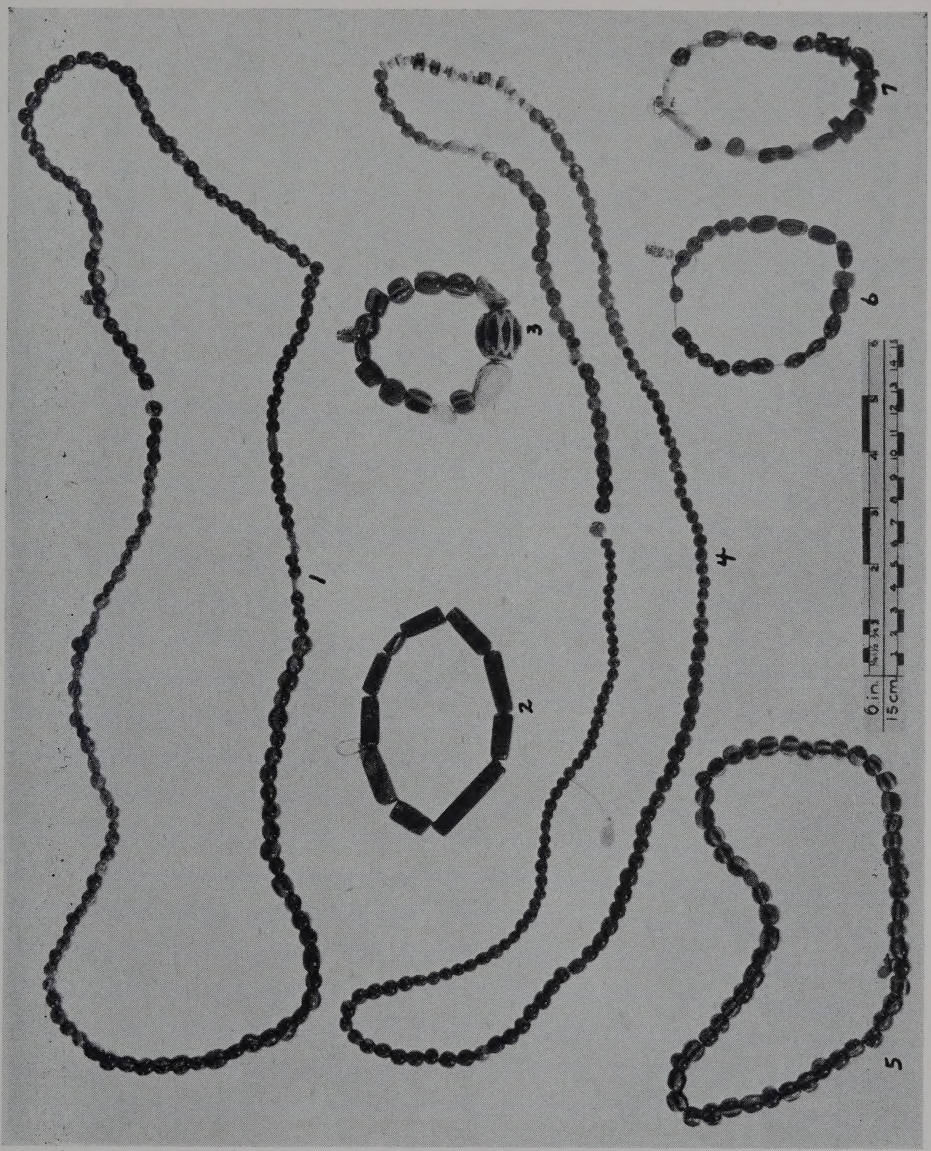


Plate 15. Glass, stone and shell beads from Cemetery 1. 1, glass (AR 27755), burial 8; 2, red slate (AR 27874), burial 68; 3, large polychrome glass and marine shell (AR 27864), burial 62; 4, glass and discoidal shell (AR 27845), burial 60; 5, glass (AR 27762), burial 19; 6, glass (AR 27757), burial 9; 7, glass, discoidal and tubular shell (AR 27912), burial 75.

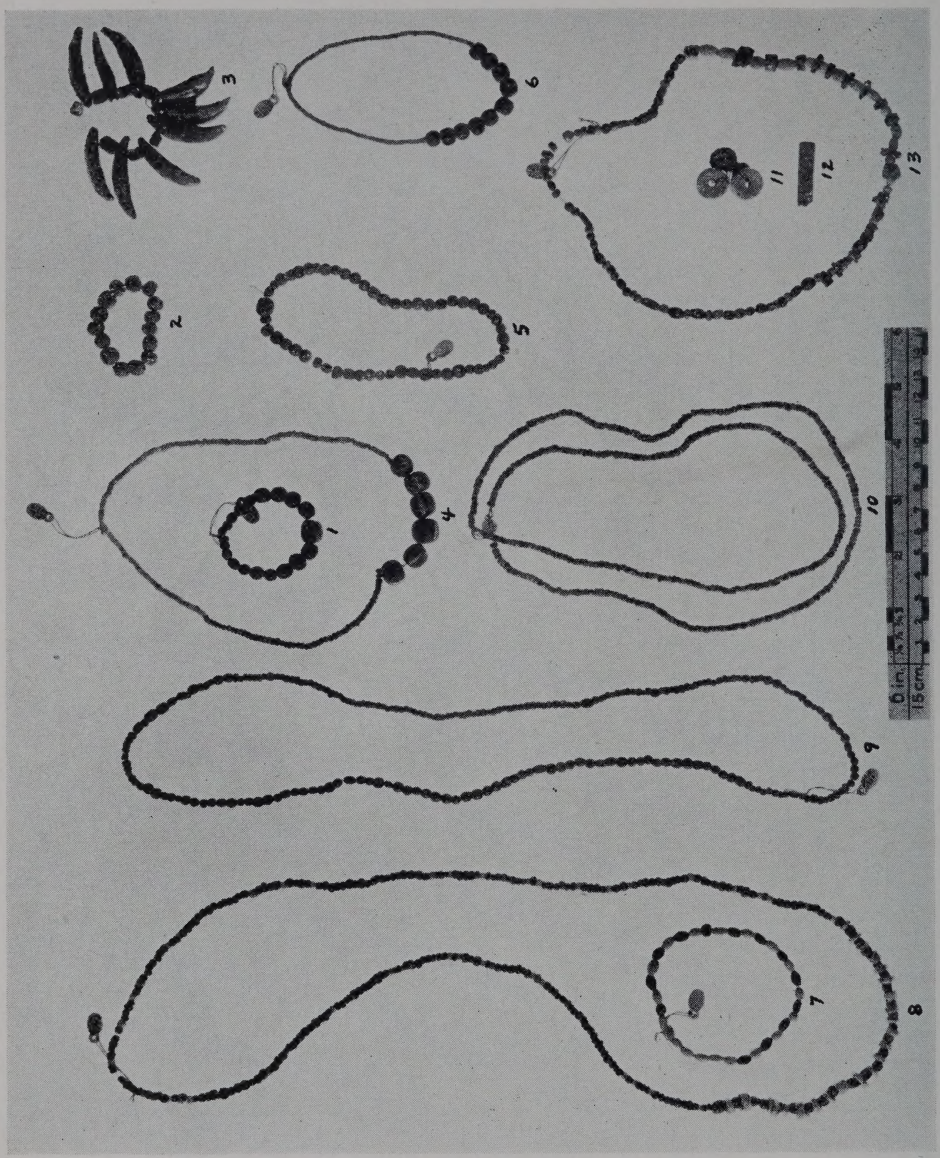


Plate 16. Glass, shell and bone beads from Cemetery 1. 1, glass (AR 27778), burial 23; 2, glass; 3, perforated canine teeth of wolf and tubular bone beads (AR 27796), burial 39; 4, glass (AR 27870), burial 67; 5, glass (AR 27764), burial 20; 6, glass (AR 27772), burial 26; 7, glass (AR 27758), burial 12; 8, glass and discoidal shell (AR 27903), burial 73; 9, glass (AR 27867), burial 63; 10, glass (AR 27918), burial 34; 11, large discoidal shell (AR 27880), burial 69; 12, tubular bone bead (AR 27909), burial 74; 13, glass and discoidal shell (AR 27792), burial 38 a and b.

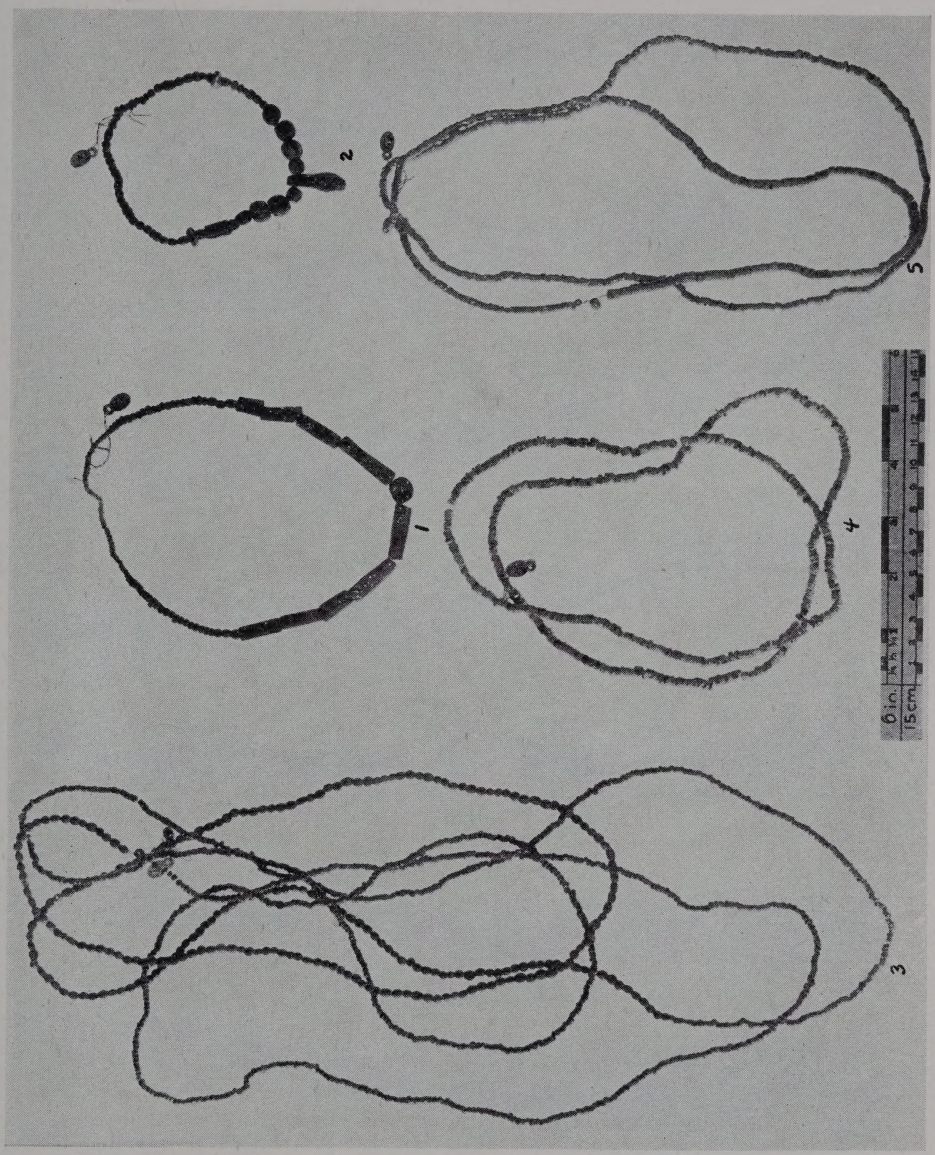


Plate 17. Glass and shell beads from Cemetery 1. 1, glass (AR 27753), burial 5; 2, glass, discoidal shell and perforated elk canine (AR 27910-11), burial 74; 3 glass (AR 27844), burial 60; 4, 5, small discoidal shell and native wampum (AR 27765), burial 22; (AR 27884), burial 69.

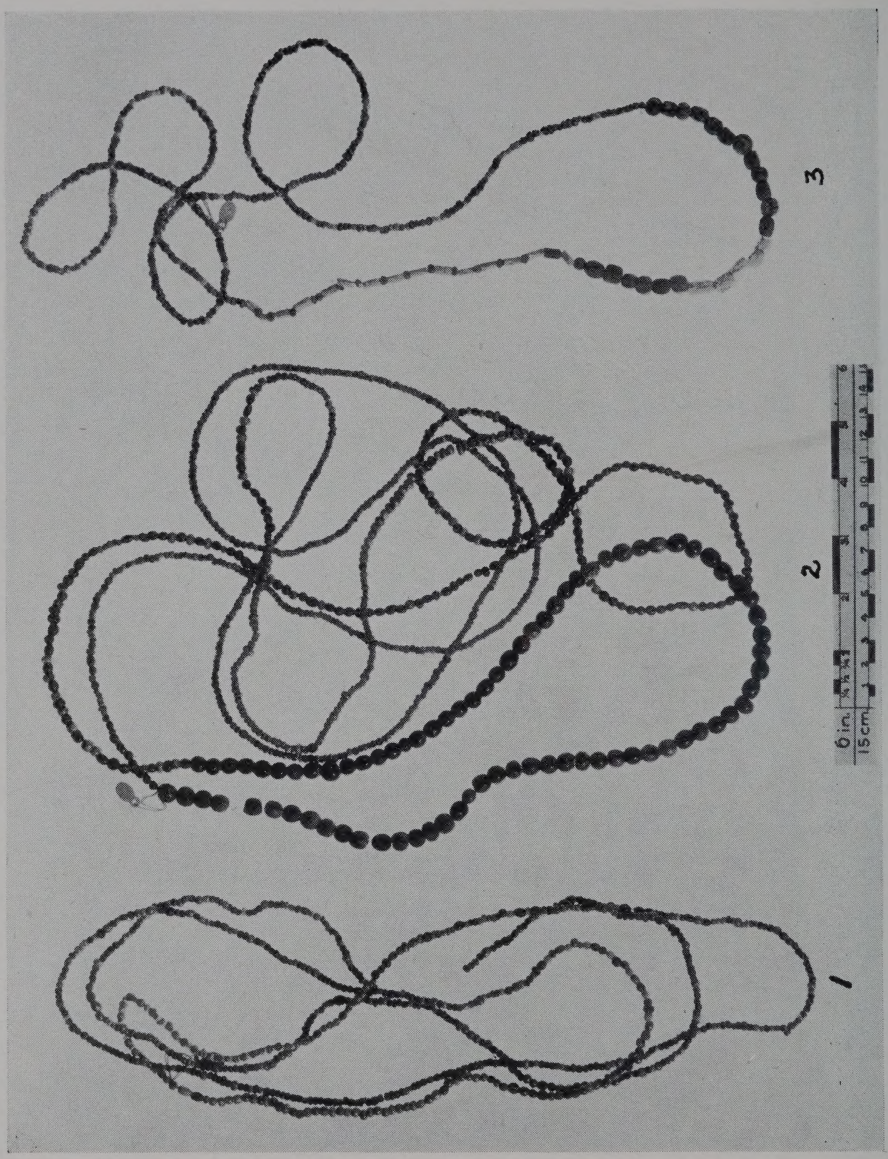


Plate 18. Glass and shell beads from Cemetery 1. 1, glass (AR 27852), burial 60; 2, glass AR 27883), burial 69; 3, glass and native wampum (AR 27875), burial 68.

the bead, creating the effect of a striated surface. In Pl. XV, 3, 5, there are blue and white beads of this sort. Still another sub-type is that in which very fine inlays have been made, and the bead twisted while molten, so that the final effect is that of a small spiral. Good examples are present in Pl. XV, 1; XVI, 2, etc. An unusually attractive result of the "melon" technique occurs when a white translucent glass is inlaid with stripes of an opaque or milk white, as in Pl. XV, 7.

Seed Beads. A third principal type found at Dutch Hollow and perhaps numerically the most important is the seed bead. These are always small, with a tendency to an annular as contrasted with a globular shape, and are generally self-coloured in opaque white, red or blue (Pls. XVI, 4, 6, 8-10, 13; XVII, 2, 3; XVIII, 1-3). Some of them have a core of transparent green or colourless glass. They are seldom more than 2 mm. in diameter. A very few seed beads have inlaid stripes like the melon beads, but seldom in more than one colour.

Miscellaneous Types. It will be noted from the illustrations that a number of other types occur at Dutch Hollow. The small oblong beads occur sparsely, and are predominantly pale green, opaque and self-coloured (Pl. XVI, 7, 13). A few are semi-translucent blue. Another type is the solid-colour globular, which is characteristically a dull red (Pl. XVIII, 2). The last significant type is the tubular bead (Pl. XVII, 1) which has been made by cutting or breaking long canes which were usually square in cross-section and which were either straight or twisted spirally. They are generally a monochrome, either a blue, bluish green or dull red, the latter probably in imitation of the native bead of red slate. A few are round in section.

From the evidence at hand the beads from Dutch Hollow appear to be predominantly of the seed and globular forms, with only a sprinkling of the tubular shape which becomes dominant at certain later sites. The star or chevron is conspicuous, but chiefly in small sizes, and not cut as extensively as is the case in later times.

As for the point of origin of the trade beads, nothing very informative can be stated at the moment. Popular tradition has it that they originated in Venice, or more properly at Murano, an island adjacent to and under the suzerainty of Venice where all the glass-making industry of the state was centered. While this may be true, it seems unlikely in view of the widespread knowledge of glass manufacture throughout western Europe at the time. On the other hand, it is altogether likely that most of the glass beads which were brought to America in the decades or century following the discovery were of Venetian origin, and quite possibly this includes many, or even all, of those from Dutch Hollow. Other possible sources, it seems to me, are Holland, England and France.

A much more intensive study now under way should further illumine not only the origin of beads, but the order in which they were brought to the North American continent and their dispersion amongst the Indians.

Of much less popularity than the glass beads were the tubular sheet brass forms, evidently only of European provenience with respect to the material. These have their apparent prototypes in the tubular bone beads and like them they vary in diameter and length (Pl. 12, figs. 7, 13-15). In a number of instances the string, invariably a leather thong, was preserved by the copper salts.

Functionally related to the beads are the much scarcer pendants, which also occur in several forms and materials. Those of stone, all of Indian make, comprise the following: a flat, oval ornament of red slate, perforated near the edge at the narrower end, 1¾ inches long by one inch in maximum breadth; an irregular trapezoidal, natural limy concretion, perforated near one edge at the smaller end, length 1¼ inches, maximum breadth 1⅛ inches; another natural limy concretion, shaped like a fishhook and grooved around the shank (Pl. 13, fig. 1); a flat, shale pebble, with expanded center and lobate ends, perforated through one lobe (Pl. 13, fig. 2); and a fossil brachiopod, 2 inches long, having a small drilled hole through the center of the curved edge. All are refuse finds in the village area, except for the two illustrated. Perhaps to be classed as rude pendants rather than beads are several irregular waterworn stones or concretions, containing natural or artificial perforations, found with burials.

Two rude shell pendants, about 2 inches long, in a poor state of preservation, came from the graves. Both are oval in shape and were made from the whorl of the conch shell. These pendants suggest the type found in the early historic Erie site at Ripley, N. Y.[1] A linked trait with prehistoric Iroquoian sites in the area comprises the bone pendants made by drilling the projecting end of the epiphyseal cap from the femural head of the immature deer, of which three are recorded from the refuse.[2]

Except for a possible lead or pewter pendant in a poor state of preservation, reported by Mr. Hill from burial 75, Cemetery 2, the metallic ornaments classified as pendants consist of circular (in one case pear-shaped and concavo-convex), flat, sheet brass objects with one, or occasionally two, marginal perforations. Evidently these were usually worn in groups of two or more, apparently on the chest (Pl. 12, figs. 8, 16, 17; Pl. 13, fig. 10). Leather thongs were still attached in several examples.

What we have interpreted as fringe ornaments worn along the sleeves and bottoms of leather shirts and for similar decorative purposes, are illustrated in the rolled, conical sheet brass articles pictured on Pl. 12, figs. 9, 10 and Pl. 13, figs. 6-8. The type may have been suggested by the widely used Owasco and Iroquoian deer phalangeal cones, at least three of which are in the Museum collections from the Dutch Hollow refuse. Parker has

---

[1] Parker, 1907. Pl. 36, figs. 2, 3, 5.

[2] See illustration from Richmond Mills site in Parker, 1918, fig. 9, 11.

illustrated them from Richmond Mills,[1] the writer from many Owasco stations.[2]

Other probable clothing or necklace ornaments of brass include the hawk-bells found very occasionally both in graves and refuse (Pl. 12, fig. 12; Pl. 13, fig. 9), and the still rarer wire spirals (Pl. 12, fig. 11).

Bracelets made of cut sheet brass (Pl. 12, fig. 22) and occasionally of brass wire (Pl. 12, fig. 23) occurred on the lower arms of several skeletons, also as loose grave offerings. Iron bracelets like figure 21 of Plate 12 were very rare. A few examples of what seemed to be finger rings fashioned of sheet brass (Pl. 12, fig. 24) also were present as grave goods.

There remains a small series of artifacts from the graves which we believe were used in personal decoration. The most numerous of these are the unmodified os penis or splanchnic bones of the raccoon found near the chest or skull in a number of instances, in one case, where the preservative influence of copper salts operated, with leather thongs attached (Pl. 13, fig. 3). Usually they occurred in groups of two or more (Pl. 9, fig. 6). This constitutes a residual trait from prehistoric times since they have been widely recorded from Iroquoian stations.

A probable neck ornament is shown in Pl. 12, fig. 25, from burial 51, Cemetery 1, found with other offerings in a pottery vessel. It consists of two wide brass rings having diameters of 3¼ and 3¾ inches, respectively, oval in cross section, the tapering and overlapping ends of which have been tied together with a wrapping of two-strand twisted cords of plant fiber. At the point of union is the remnant of a knotted rawhide thong, 12 inches long on one side, 8 inches on the other, evidently what remains of a long suspending cord. Below the knot, on the opposite edge, the rings are again tied together, this time with a 4½ inch leather thong, terminating in a green copper-stained knot which may at one time have secured a dangling metal pendant. Rather similar single ring devices occurred in several graves of the Adams and Factory Hollow sites reported by Mr. Wray. Another and larger specimen came from the breast of a child on an early historic period Onondaga fishing camp at Brewerton, on the south side of the Oneida River, Onondaga Co., N. Y.

Cut sheet brass sections, one multiperforated (Pl. 12, figs. 19, 20), were found behind the hip in burial 48 and near the hands in burial 68, respectively. It is presumed that they were ornamental, the first having been, perhaps, a clothing embellishment.

Rather extensive use seems to have been accorded the claws of the black bear, the great horned owl, and perhaps other large birds of prey. For example, in burial 49, that of a woman about 25 years old from Cemetery

---

[1] Parker, 1918, Fig. 9, 1-5.
[2] Ritchie, 1944, Pl. 29, figs. 27-31.

1 (see page 10), six bear claw cores were found in pairs, beginning under the mandible and extending at irregular intervals to near the feet (Pl. 9, fig. 3). It seems likely that they may have been attached to a long skin robe. In several other burials, e.g., numbers 41 and 48, in Cemetery 1, bear and owl claw cores (and in the latter also turkey wing bones) occurred behind or near the head, as though worn in the hair. In other cases they seem to have formed necklace elements.

It is impossible to determine whether the wearing of mammal and bird claws, bird skins or parts thereof, and bear and wolf fur robes with jaws attached, evidence for the use of which will presently be adduced, depended primarily upon their decorative effects or their supposed magical properties, or perhaps on a combination of both. Extensive references to the employment of animal claws as amulets, arising out of widespread concepts of imitative magic, are contained in the literature of ethnology applying to preliterate groups in many parts of the world. There is sound reason to conclude that similar notions also prevailed in Iroquoia.

The most striking instance of the probable use of the plumage, as well as the claws of the great horned owl, and the wings of the wild turkey, for head ornaments, came to light in burial 48 of Cemetery 1 (see page 9 and Pl. 9, figs. 1, 2, 7).

What may have been headbands occurred in several graves, notably with burials 21 and 101, Cemetery 2. In the first instance, the skull of an adult male bore across the forehead and extending down to the chest, a row (single?) of rolled brass beads bordered (both sides?) by glass "star" beads. Under the band, preserved by the copper salts, remained fragments of feathers and human hair. The second example comprised a band (width ?) of large red, white and blue striped beads resting upon the forehead.

The clearest evidence of head or hair ornaments is to be found in the antler combs, which with certain of the pipes constitute the most artistic products of local manufacture. That they are based upon prehistoric Iroquoian models of the same area, there can be no question. However, whereas three or four coarse, widely spaced teeth are the rule in the earlier specimens, the Dutch Hollow examples exhibit the results of metal tool processes, not only as respects the greater number of finer, more closely spaced teeth, but in the carving of the top to depict various effigy forms, a rare practice in precontact times (Pl. 9, figs. 24-26). The iron saw already described (Pl. 14, fig. 4) could have been used in comb manufacture.

Most of the combs found occurred behind or near the skull and in Cemetery 1. Two of those illustrated accompanied infants or children (figs. 24, 26), one came from the grave of an adult male (fig. 25 and Pl. 4).

Two double combs, one of bone (Pl. 9, fig. 23), the other of wood, were also found near the skulls of an infant and an adult, respectively.

Figure 23 is surely of European origin, the second, insofar as can be judged from what remains, is likewise an importation. This comb form was unknown to the area prior to the historic period.

The extensive use of mineral pigments in personal decoration, and perhaps ceremonially as well, is indicated by the finding of numerous "paint-stones" composed of hematite, limonite and graphite (Pl. 14, figs. 7-10) in graves of individuals of all ages and both sexes (Pl. 4). Hematite (fig. 9) was the most common, consisting of more or less tabular fragments of Clinton iron ore, which outcrops extensively some 20 miles north in the Silurian formations around Rochester and eastward to Otsego County.[1] It was doubtless prepared by grinding, which produced the observed facets, and mixing with oil or grease. In a few graves a bright red stain probably marked the location of a perishable receptacle of the powdered or prepared pigment.

Limonite or bog iron ore (fig. 10) which was available in limited quantities at various marshy spots in the general region, and which produced a yellowish or brownish paint, had a lesser popularity, as did graphite (figs. 7, 8) from which a gray paint could be made. Unlike the other two, graphite was not locally available, the nearest known outcrops occurring in St. Lawrence County[2] from which it may have been obtained by the Seneca through Onondaga trade relations.

While the implements for grinding and mixing paint could not with certainty be identified, one small, cylindrical, limestone object, 2½ inches long and three-fourths of an inch in diameter, is possibly a paint pestle for working the ground ore particles into the grease. It came from the surface in the village area and is in the Rochester Museum collection. I suspect that a gritty sandstone slab, like the specimen found in burial 48, Cemetery 2, was the usual abrading device. Conceivably the implements described as whetstones (Pl. 7, figs. 32-36) may have in part served this purpose, as is suggested by the discovery of one associated with a clam shell (not, however, containing pigment) in burial 43, Cemetery 1.

Reference has already been made to the discovery of indubitable vestiges of fur robes, the only kind of garment for which evidence survives. These were present in no fewer than five graves, mainly in Cemetery 1, pertaining to a child (burial 38a, Cemetery 1) and adult individuals (burials 36, 39, 47, Cemetery 1; burial 24, Cemetery 2). The clues comprise the occurrence, usually behind or above the skull, of the anterior maxilla or maxillae of the bear, wolf, and large dog, as shown in Pl. 10, figs. 5-7). Pottery pipes bearing a human head surmounted by a bear or wolf occur sporadically in the Seneca country and seem to depict the wearing of the kind of fur robe

---

[1] Peterson, 1950, pp. 33-35.
[2] Ibid., pp. 73, 77.

indicated by the finds at Dutch Hollow, the Adams site, and elsewhere.[1]

Describing a group of visiting Susquehannas about 1612, Captain John Smith notes what appears to be a similar garment. "Their attire is the skinnes of Beaver and Woolves; some have Cassacks made of Beares heads and skinnes, that a man's necke goes through the skinnes neck, and the eares of the beare fastened to his shoulders behind, the nose and teeth hanging donne his breast, and at the end of the nose hung a Beares Pawe: the halfe sleeves coming to the elbowes were the neckes of Beares, and the armes through the mouth, with pawes hanging at their noses . . ."[2]

This reference to bear paws again suggests parallels at the Dutch Hollow site where the bones and claw cores of a bear found at the elbow of a senile individual (burial 39, Cemetery 3) almost certainly represent a bear-paw pouch.

Smoking Pipes of Stone, Clay and Wood

Unlike the Onondaga and the western Iroquoian tribes, the early Seneca seem not to have been greatly inclined to the custom of smoking, since pipes are relatively scarce items on prehistoric and early historic period sites. Following the extensive adoption of captives during the Iroquoian wars, beginning in middle historic times, this situation apparently changed, for pipes rapidly increase in numbers on Seneca sites after about 1640.

At Dutch Hollow several styles of the dominant Iroquoian trumpet form occurred in the village refuse, mostly in a fragmentary condition, and intact in the graves. These embrace the plain, round-topped variety of wide and early distribution (Pl. 19, fig. 6), perhaps the most closely related typologically to the pre-contact Seneca style; the so-called square-top trumpet form (Pl. 19, fig. 5), which has parallels at Richmond Mills, among the Erie, in Huronia, and elsewhere; the ring-bowl trumpet (Pl. 13, figs. 11, 15), which suggests Neutral and Lalonde relationships; and the effigy trumpet (Pl. 13, figs. 12-14; Pl. 19, figs. 2, 4), which attained its highest vogue in the Seneca country between about 1640-1687.

The rarer stone pipes conform to the vasiform type found among the western Iroquois and in ruder form on the Richmond Mills site series.[3] Whether the latter evolved into the Dutch Hollow forms cannot now be determined. At present I incline to the opinion that, as at the Adams site, where they are also of exotic materials, the vasiform pipes represent importations from Erie and Neutral sources.

Of the two specimens illustrated on Pl. 19, figs. 1,3, the first is of unusual interest in that the rear surface of the bowl, opposite the stem aperture,

---

[1] See illustration in Parker, 1922, Pl. 52, fig. 6.
[2] Quoted in Hanna, 1911, p. 26.
[3] Parker, 1918, Fig. 6, 7-9.

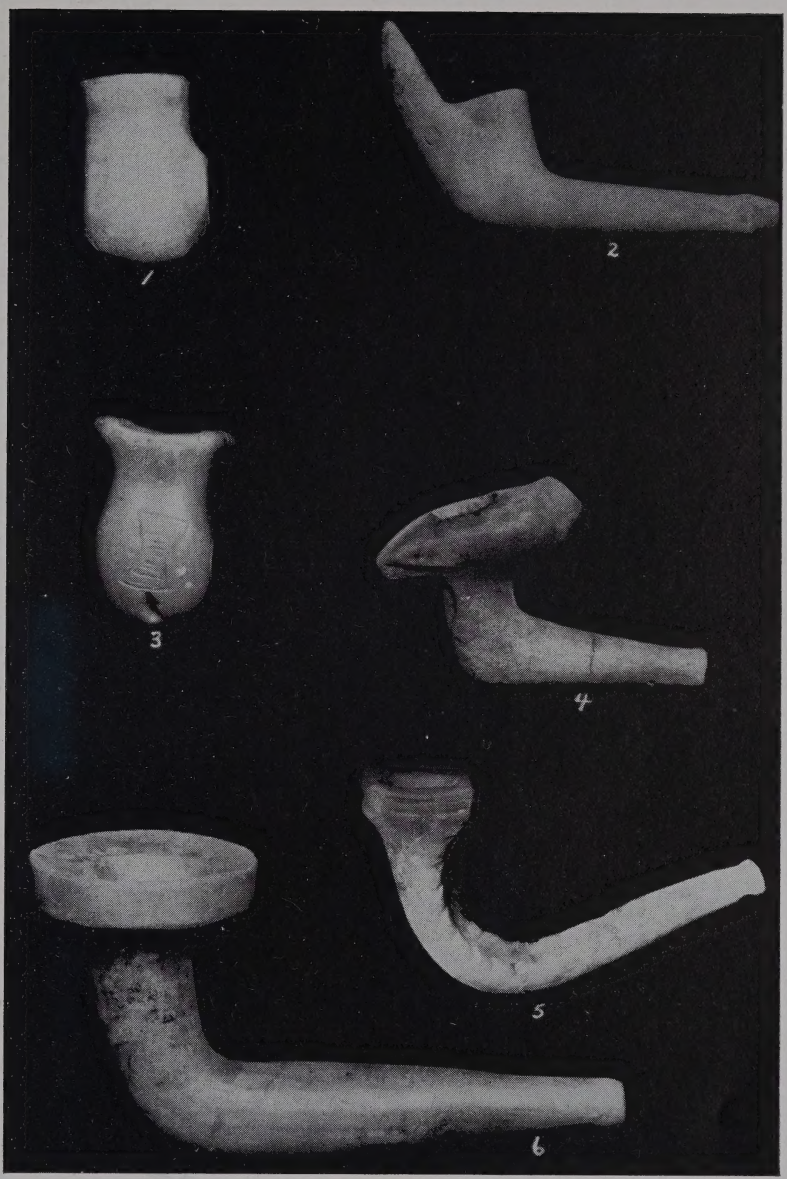


Plate 19. Stone and pottery pipes from Cemetery 1. 1, vasiform type of buff colored marble (AR 27812), burial 47; 2, crow effigy, pottery (AR 27838), burial 59; 3, vasiform type of tan steatite with incised hourglass figure on either side (AR 27779), burial 36; 4, duck (?) effigy, sans head, pottery (AR 27825), burial 48; 5, square-topped trumpet form, pottery (AR 27794), burial 39; 6, plain trumpet form, pottery (AR 27795), burial 39.

contains a neatly-made and snugly-fitted round bone plug, three-eighths of an inch in diameter, obviously inserted to block a perforation accidentally made in drilling the stem hole.

The presence of wooden pipe bowls, smoked with wooden or reed stems, as in the case of the vasiform type just described, is attested by the discovery of two sheet brass pipe-bowl liners (Pl. 12, fig. 6). These have occasionally been found in place within partially preserved, carved, wooden pipe bowls on later Seneca stations.

It is of interest to observe that the last example illustrated accompanied the remains of an infant (burial 31, Cemetery 1), and that the stone pipe shown in Pl. 19, fig. 3, came from the grave of an adult woman (burial 36, Cemetery 1). For the most part, however, insofar as could be determined, pipes formed a part of the burial equipment of adult males.

Concepts of the Supernatural

That the Dutch Hollow Senecas maintained "ideas of duration and continuity" with respect to themselves and their culturally created world is amply demonstrated by their mortuary practices. However, without the illumination afforded by the meager but nearly contemporaneous historical records for the Huron, similar accounts for the later Seneca, and ethnological data gathered during the last hundred years on Iroquoian reservations, only generalized constructuals of this segment of the culture would be possible. This unfortunate fact emphasizes once again the limitations of the archeological method of cultural reconstructions, but on the other hand the kind of evidence brought to light here provides the ethnohistorian with much needed depth perspective into the processes of growth and change in cultural delineation and patterning. Accordingly, an attempt will be made not only to relate the Dutch Hollow findings to the recognized picture of Iroquoian, particularly Seneca, ceremonial life, but also to indicate, insofar as possible, significant variations from later themes.

In the transitional Dutch Hollow period of Seneca tribal history, burial was still exclusively in the flexed position, in cemeteries which, as above discussed, appear to have been connected with clan subdivisions of the social group. A democratic ordering of society, with a more or less equalized status of the sexes and a high regard for children, is adduceable from the absence of indications of burials of rank and especially prepared graves, together with the approximately symmetrical distribution of mortuary offerings with the remains of men and women, and the prevailingly abundant furnishings of infants and children.

Plate 20. Restored pottery vessels from Cemeteries 2 and 3. Hill collection. 1, Ripley Collared type (7-67/17); burial 67, Cemetery 2; 2, Seneca Barbed Collar, variant with exaggerated barbs (7-22/1), burial 22, Cemetery 3; 3, Cayuga Horizontal (7-10/1), burial 10, Cemetery 2.

Plate 21. Pottery vessels, restored or intact, from Cemetery 2. Hill collection. 1, Thurston Horizontal type (7-73/1), burial 73; 2, probable variant of same type (intact) (7-107/1), burial 107; 3, Ripley Collared (7-88/1), burial 88.

Plate 22. Double-mouthed pottery vessels from Cemeteries 1 and 2. 1, intact pot (7-121/3), burial 121, Cemetery 2 (Hill collection); 2, reconstructed (AR 27749), burial 69 (Roch. Mus. of Arts & Sciences).

Plate 23. Pottery vessels, restored or intact, from Cemetery 1. All of Seneca Barbed Collar type. 1 (AR 27747), burial 50; 2 (AR 27761), burial 18; 3 (intact) (AR 27773), burial 30.

Plate 24. Restored pottery vessels, all of Seneca Barbed Collar type, from Cemetery 1. 1 (AR 27769), burial 23; 2 (AR 29370), burial 51; 3 (AR 27836), burial 54.

Plate 25. Restored and intact pottery vessels from Cemetery 1. 1, intact, untyped pot (AR 27834), burial 54; 2, Dutch Hollow Notched (AR 27935), burial 56; 3, intact pot of Seneca Barbed Collar type (AR 27873), burial 67.

Plate 26. Restored pottery vessels from Cemetery 1. 1, Long Point Nocked type (AR 27756), burial 9; 2-4, Seneca Barbed Collar type (AR 27752), burial 5; (AR 27801), burial 41, (AR 27835), burial 54.

Plate 27. Restored and intact pottery vessels from Cemetery 1. 1, Ripley Triangular type (AR 27748), burial 7; 2, intact, Seneca Notched type (AR 27904), burial 73; 3, Ripley Corded (AR 29371), burial 26; 4, intact pot of Dutch Hollow Notched type (AR 27882), burial 69.

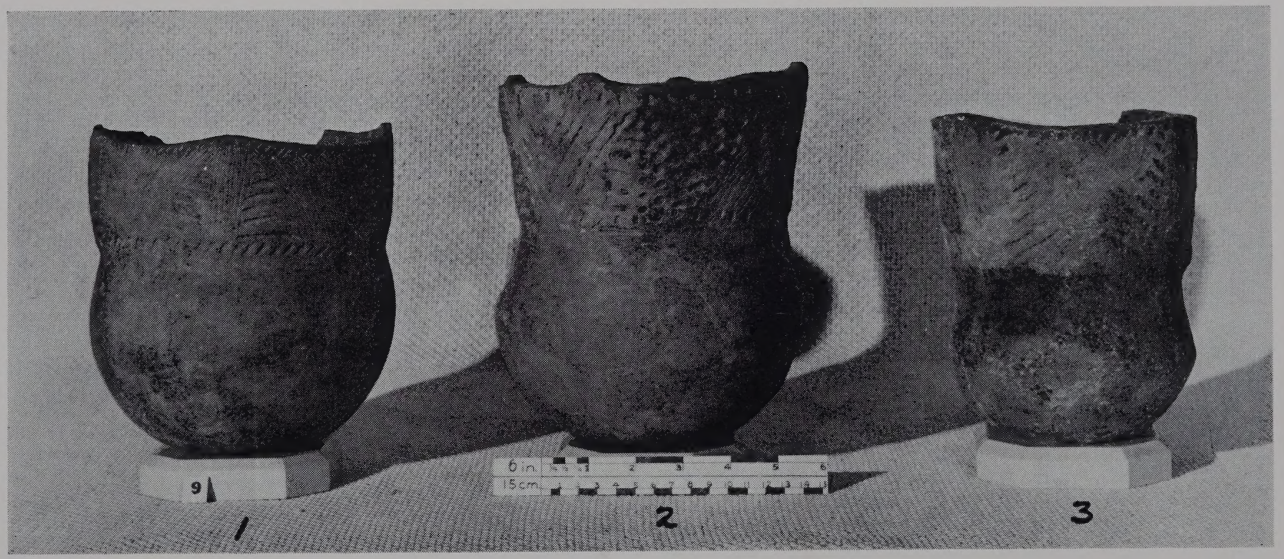


Plate 28. Intact and restored pottery vessels from Cemetery 1. 1, intact pot of Richmond Incised type (AR 27833), burial 53; 2, 3, Ithaca Linear (AR 27934), burial 35; (AR 27826), burial 48.

Plate 29. Restored pottery vessels from Cemetery 1. 1, Ripley Triangular type (AR 27935), burial 56; 2, Long Point Horizontal (AR 27827), burial 49; 3, Ripley Collared (AR 27770), burial 23.

Plate 30. Intact and restored pottery vessels from Cemetery 1. 1, intact probable variant of Richmond Incised type (AR 27760), burial 18; 2, elongate necked variant of Long Point Horizontal type (AR 27763), burial 19; 3, Seneca Barbed Collar (AR 27745), burial 63.

In certain respects, viz., flexed mode of burial, multiple cemeteries, and absence of evidence of a social hierarchy, the patterning of custom seems to follow prehistorically established Iroquoian tradition and even to represent some continuity with Owasco norms.[1] On the other hand, there are marked differentiations from older cultural practices of the Early and Middle Woodland periods in the New York area.[2]

The chief break with earlier Iroquoian and Owasco traditions is found in the now prevailing custom of providing equipment for the use of the dead, a practice which had begun in Archaic III times, reached its climax between the Early Woodland I and Middle Woodland II periods, and waned rapidly thereafter.[3] The re-emergence of this trait among the Iroquois with the beginning of the historic period[4] presents a still unsolved enigma. Perhaps it represents a tangible expression of the sense of opulence associated with the possession of trade goods, perhaps with a revival of concern with personal permanence.

The nature of the associated artifacts in the burials discloses relatively little relationship between the probably well differentiated sexual division of labor in secular activities and provision for the life beyond.[5] It hardly seems probable, however, in the light of other evidence to be presented, that a different order of existence was anticipated. A suggestive clue to this problem is found in the following statement concerning Iroquoian customs, in the *Jesuit Relation* of 1656-57:

"They make their most serious illnesses ridiculous by the gross superstition with which they seek to cure them. They are convinced that they are afflicted with diseases only because the soul is in want of something for which it craves; and that it is only necessary to give it what it desires, in order to detain it peacefully in the body. They all vie with each other as to who shall be the most liberal, giving to the sick person all the presents that he desires and on which he considers that his life depends. A dying man may be seen surrounded by awls, scissors, knives, bells, needles, and a thousand other trifles, from the least of which he expects to obtain health."[6]

May it not be that the often incongruous offerings made during the final illness accompanied the deceased to his grave, along with the traditional food and drink, clothing, personal ornaments and other pertinent accoutrements?

In the preparation of the grave itself some clear indications of method

---

1 At least two cemeteries have been found on the Iroquoian Belcher site at Allen's Hill and two were discovered on the Owasco Sackett site at Canandaigua (Ritchie, 1936, pp. 55 ff.).
2 Ritchie, 1944; 1951.
3 Ritchie, 1951.
4 At the Adams site, dated by Wray between 1550-1575, 128 of a total of 248 burials (52%) contained grave goods. At Dutch Hollow the percentage had risen to 65%.
5 Burial 60, Cemetery 1, provides a noteworthy exception.
6 Thwaites, Vol. 43, pp. 265, 267.

remain at Dutch Hollow owing to the preservative effects on organic materials of the copper carbonate produced by the action of soil acids on the brass (in some cases perhaps copper) articles. Burials 24 and 40 in Cemetery 1, and 75, 94 and 101 in Cemetery 2, provided the most valuable data of this kind, which show that the grave fossae were lined and floored with bark,[1] over which were spread deer skins with hair attached and probably fur robes made of mink, muskrat and beaver.[2] The flexed or folded corpse, clothed and ornamented, and probably wrapped in a robe or shroud of skins or pelts, was then interred, with or without offerings of food, water, tools, weapons, etc.[3] From the fact that remnants of bark coverings have been found by the writer and others in later period Seneca graves, it may plausibly be assumed that this final preparation to protect the body was practiced at Dutch Hollow.

One grave (burial 4, Cemetery 5), that of a child, contained considerable charcoal and wood ashes immediately enveloping the skeleton, suggesting that the ground may have been warmed for the reception of the corpse.[4]

Burial 24, Cemetery 1, presented evidence, in the form of a four-inch layer of fine claylike wash from the grave walls over the skeleton, that the grave had been left open for some time at least, a phenomenon elsewhere noted by the writer. An observation among the Huron made by Father Brébeuf in 1636, may serve to throw some light on this point. He says, "As to what is the state of the soul after death, they hold that it separates in such a way from the body that it does not abandon it immediately—"[5] This statement raises the possibility that graves were left open for a certain period for the convenient departure of the soul, and it further illuminates the conceivable concept underlying the food offerings so commonly found and further indicated by the presence of pottery vessels.

The immolation of dogs, all of a large breed resembling those also found in graves on the Frontenac Island site,[6] is a matter worthy of note. The animals were killed by a blow on the head from a pronged club which pierced and partly shattered the skull. Dog skeletons occurred in several graves of men and women in Cemetery 1. One may be seen *in situ* in Plate 3. They were also present in five graves on the Adams site.[7]

---

1 Species not determined.

2 Beaver definitely identified, others provisional.

3 "Meanwhile,—after the dead man is buried, and his grave is filled with provisions for the sustenance of his soul, and after a sort of sacrifice has been offered to him by burning a certain quantity of corn,—the elders, with the friends and relatives of the deceased, are invited to a feast, to which each one brings his presents to console the most afflicted." ("On the Character and Customs of the Iroquois," Relation of 1656-57, Thwaites, Vol. 43, pp. 267, 269.)

4 This procedure was obviously followed in an infant burial (No. 23) on the late Archaic Frontenac Island site. (Ritchie, 1945, p. 52, Plates 29, 30.)

5 Kenton, Vol. 1, p. 256.

6 Ritchie, 1949, pp. 7-8.

7 Personal communication from Charles F. Wray.

The custom of covering the body with flat stones or rounded cobbles or boulders was not commonly followed by the Iroquois but sporadic instances have been observed on nearly every Seneca site of the historic period. At Dutch Hollow six graves of children and adult males and females were so treated (burials 6, 25, 35, 49, 57, in Cemetery 1, and burial 4, Cemetery 4). One grave, number 57, partially lined and covered (a few of the overlying boulders have been removed) is pictured in Plate 2.

A number of Dutch Hollow graves were marked by lens-shaped masses of very dark organically stained soil at the top, denoting the decayed residue of duff or vegetable growth which had formed in the sunken hollow resulting from the disintegration of a part of the grave contents, attended by the settling of the fill. Ultimately, plowing had obscured these depressions, which likewise characterize many cache pits of the Late Woodland period.

Ceremonial Paraphernalia

From Fenton's discussion of Seneca ceremonies at the Coldspring Longhouse come a number of potential leads to the comprehension of certain findings at Dutch Hollow as, for example, in the succeeding passage:

"The Four Sacred Ceremonies are addressed to the Creator. They were given in the creation and confirmed by Handsome Lake. They now form an integral part of the longhouse festivals, *and the Seneca look forward to performing them in the hereafter* (italics mine). When a speaker returns thanks for them, he places them in the sky world. They are the Great Feather Dance, Personal Chant, Thanksgiving Dance, and the Bowl Game or wager. The Great Feather Dance is a costumed dance for men and secondarily for women, and the music is provided by two singers, representing each moiety, who sit facing each other astride a bench and pound out an accompaniment with turtle shell rattles which they hold in both hands. The songs are symbolic of stations in the pantheon."[1]

Elsewhere in the same paper he records the participation of women and children in the major ceremonies.[2] This being the case, and the expectation of a continuity of life and custom in the hereafter being attested by all lines of evidence, some of the mystery is dispelled which surrounds the discovery of ritual material, notably turtle shell rattles, in graves of men, women and children (Plates 1, 6).

However, the style of the rattle employed, at least since Morgan's day, in the performance of the Great Feather Dance and the rituals of the False Face Company, has evidently been changed at some as yet undetermined

---

[1] Fenton, 1936, p. 16.
[2] Ibid., pp. 11, 13, 15.

intervening period, for the snapping turtle shell *(Chelydra serpentina)* described by Morgan and his successors down to Fenton, is not the instrument found in any of the graves at Dutch Hollow or cognate stations. As depicted on Pl. 10, figs. 1-3, the shell of the box turtle *(Terrapene carolina)* accounts for all of the identifiable rattles, spared in whole or part from the ravages of decay. Moreover, these instruments differ from the historic kind in having a triple series of paired drilled perforations through the carapace, and a varying number and arrangement of similar holes through the plastron.[1] As a final difference, the early models contain small pebbles in place of the dried corn kernels of later date. Such rattles have almost exact counterparts in certain pre-Iroquoian cultures in the New York area.[2]

While it cannot, of course, be assumed that a similar use and meaning applied to these stylistically similar artifacts over the very long time period involved in the existence of these sundry cultures, in the case of the Iroquoian specimens at least the probabilities of analogous significance are augmented by Father Lalemont's unmistakable allusion, in the Relation of 1639, to the role of the turtle shell rattle (unfortunately not fully described, but containing pebbles) in a ceremony for the healing of a sick woman, after the manner of the False Face Company.[3] He also mentions the Huron use of the turtle rattle in hunting, "in order to invoke the aid of his demon,"[4] which usage, I suspect, was extremely old and quite likely prevailed among the Archaic period hunters of the Lamoka and Frontenac Island sites.

A nearly identical type of box turtle rattle served the Delawares in their Big House Ceremony.[5] Among this Algonkian group, as well as in Iroquoian cosmology, the turtle was a symbol of the earth or the earth-bearer.[6] This concept is recorded among the Huron in 1639[7] and it was probably of wide-

---

1 Compare these specimens with the snapping turtle rattles illustrated in Fenton, 1941, Plates 23, 1 and 24.

Among the modern Seneca at Coldspring Longhouse, the imperforate box turtle rattle "is a minor instrument, used during only one ceremony, the Women's Rite"—which "occurs on the afternoon of the eighth day of the Midwinter Festival." (Conklin and Sturtevant, 1953, pp. 283-284.)

The same authors (1953, p. 272) refer to a tradition reported by Fenton and Dodge which suggests that the bark rattle, an acceptable substitute for the snapping turtle rattle in the False Face rites of the later Iroquois, may have preceded the latter device.

Perhaps rattles of bark and perforated box turtle shell constituted "singing tools" of the early Seneca and the latter was supplanted by the snapping turtle shell rattle sometime in the eighteenth century in response to the growing scarcity of the box turtle in the Seneca country.

2 Owasco (Ritchie, 1936, p. 48; Ritchie, Lenig and Miller, 1953, p. 16), Point Peninsula (Ritchie, 1944 p. 140), Frontenac (Ritchie, 1945, Pl. 12, fig. 25), Lamoka (Ritchie, 1944, Pl. 160, fig. 34).

3 Kenton, Vol. 1, pp. 390-391. Sagard, in 1623-24, also witnessed a healing ceremony among the Huron in which the turtle rattle played a leading part. (Sagard, 1939, pp. 115-116.)

4 Ibid., p. 391, f.n. 2.

5 Speck, 1931, figs. 2, 15.

6 Ibid., pp. 44, 46.

7 Kenton, Vol. 1, p. 391, f.n. 1.

spread distribution over the whole Northeastern area.[1]

In Fenton's discussion of the archeological and historical evidence bearing on the early existence of "ritualized Iroquois masked shamanism"[2] he favors the probability that "the Iroquoian custom of wearing false faces sprang from their own or Huron culture whence it spread to the Iroquois after 1648, where it became so firmly imbedded that, despite 300 years of buffeting by white contact, the masks have maintained standards prescribed in the origin legends."[3]

Obviously archeological data bearing on this subject are difficult to come by, owing to the highly perishable quality of the masks themselves. In burial 68, Cemetery 1, at Dutch Hollow, a very interesting antler maskette occurred with the lavishly accoutered remains of a child (Pl. 6; Pl. 9, fig 10). It lay within a few inches of a turtle shell rattle, a suggestive combination, and was surrounded by what appear to be game balls of antler, also perhaps of ritualistic significance.

A second, nearly identical antler maskette, measuring two inches long and one inch wide, was found in another grave at Dutch Hollow, probably in Cemetery 2 or 3, by Mr. Harry Schoff and, together with a red slate maskette, one inch long, from the same source, is in the collection of Mr. Donald G. Cameron of Rochester, N. Y., who kindly supplied me with drawings.

According to Fenton, maskettes serve a number of purposes among the modern Iroquois. "Boys sometimes learn [to carve larger masks] by carving miniature masks. The mask may make the owner ill and then he joins the [False Face] society. Masquettes are also charms to protect dwellings against witchcraft, or they hang on larger masks. A man may carve one in response to a dream and carry it for good luck. At Cattaraugus, the leader of the society carries a striped pole on which a tobacco basket, a small wooden face, a tiny husk face and a diminutive mud-turtle rattle hang near the top. This is her staff of office when she leads the masked company from house to house exorcising plagues."[4]

While the question of the age of masked shamanism among the Seneca is left unanswered, it is perfectly clear that the maskette of antler and stone (probably also of wood) had a place in the ceremonial life of the Dutch Hollow people,[5] around the beginning of the seventeenth century.

One of the Four Sacred Ceremonies previously alluded to is the Bowl

---

1 Flannery, 1939, pp. 84, 180. I suspect, in the light of present archeological evidence which carries the tradition of turtle shell rattles back into the Archaic period, that Flannery's conclusion that its spread was due to Iroquoian influence may have to be amended.

2 Fenton, 1941, pp. 412-416.

3 Ibid., p. 416.

4 Ibid., p. 425.

5 A possible prototype for this trait from an Owasco station in eastern New York is described and illustrated in Ritchie, Lenig and Miller, 1953, p. 16, Pl. 7.

Game or Wager, which "symbolizes the struggle of the good brother, the Creator, with his evil twin brother for the control of the earth."[1] The equipment traditionally consists of a wooden bowl and six peach stones ground to oval (Fenton states "round or ovate")[2] forms and blackened on one side.[3] What was anciently substituted for peach stones we have no way of knowing, but historical evidence testifies to the existence of the game in old Huronia.[4]

It is not improbable that the 14 spheroidal antler objects (another in process of manufacture was included in the grave) (Pl. 6; Pl. 9, figs. 18, 19) represent prototypic peach stone gaming pieces, and it is certainly worth remarking that the only fragmentary wooden bowl found in any cemetery on the site came from this same grave (see p. 18). Two specimens of this kind found apparently on the slightly later Seneca site on the Warren farm, West Bloomfield, are described by Beauchamp,[5] hence we are concerned with a rare, but not unique occurrence.

At this point it may be well to describe briefly the abundant evidence for the popularity at Dutch Hollow of the game of deer buttons which yet survives among the Iroquois as a social pastime. Whether or not it had a ritual significance at that time, cannot be inferred. Morgan describes it as "strictly a fireside game, although it was sometimes introduced as an amusement at the season of religious councils, the people dividing into tribes, as usual, and betting upon the result."[6]

Since Morgan's day, at least, eight polished bone or antler buttons, burned or blackened on one side, constituted the set.[7] In our material from Dutch Hollow (Pl. 3; Pl. 9, fig. 17) the number found in seven graves varied from one to nine, and while none retains a discolored face, and all are of antler, the shape has not essentially changed with time. In three cases the burials were of women (numbers 40, 49, 60, Cemetery 1), in three others of children approximately 6-8 years of age (burials 38, Cemetery 1; 43, Cemetery 3, and A, village area) while these data are not available for burial 70, Cemetery 2.

A prior section of this report (pp. 45-46) describes the probably ornamental significance of mammal teeth and claws, the claws and other parts of the great horned owl, and the wings of the wild turkey and other large birds, as represented by osseous remains in the Dutch Hollow cemeteries. (See

---

1 Fenton, 1936, p. 16. The game is also played for secular enjoyment.
2 Fenton, letter of May 5, 1953.
3 Morgan, 1851, pp. 307-311.
4 Kenton, Vol. 1, pp. 271, 405.
5 Beauchamp, 1902, p. 324, Pl. 15, fig. 161.
6 Morgan, 1851, p. 302.
7 Although far separated temporally and without demonstrable cultural continuity, the flat, biconvex, antler objects, thought to be gaming pieces in the Point Peninsula culture, have suggestive parallels with the flat, circular, antler "buttons" of the Iroquois. (See illustrations in Ritchie, 1944, Pl. 62, figs. 2-5; Pl. 69, fig. 13.)

Plate 9.) As stated therein, a magical connotation was very likely also involved in the wearing of these animal parts.[1]

"Great Horned Owl is one of the tutelaries of the Medicine Society (Parker's Society of Mystic Animals), Hanahidos (Onondaga), Hadii 'dos or Yei'dos of the Seneca. A number of songs are addressed to him or mimic his activities." . . . "Owl is a witch! Screech owl particularly, and the lore of the Longhouse people is filled with scare stories of men who transformed into owls to frighten people. There is one such incident in the Dekanawidah legend of the founding of the League. Suits of owl feathers are sometimes mentioned."[2]

Almost certainly worn as protective charms are the antler figurines illustrated in Plate 11, two of which are shown *in situ* in a child's grave in Plate 5. Six were found on the site, four in Cemetery 1, in the graves of children between about 4 and 6 years of age (burials 67, 69, 41) and two with an infant (burial 22) in Cemetery 3. For the most part they occurred near the chest and all but one (figure 3) are perforated transversely through the neck for suspension. This latter specimen lay in the left hand of the child, close to the face.

Insofar as I can determine, these figurines first appear among the Iroquois in the early historic period and are confined to the graves of infants and children. Because of the peculiar and characteristic position of the arms they are commonly referred to as "September Morn" figurines. It would seem that they invariably represent females in an attitude of modesty, which suggests, at least to the writer, the possibility that already some remote inkling had reached the Iroquois, well in advance of missionary visitations, of a chaste virginal protectress.

An entirely different class of objects I regard as probable hunting charms. These are the non-Iroquoian and pre-Iroquoian projectile points representing at least seven different earlier cultures found in the Seneca area (see analysis in captions of Pl. 7, figs. 19-24, 29-30, and Pl. 8, figs. 2-35). Wherever the associated skeleton was identifiable, these points were observed to accompany adult males (in Cemetery 1, burials 60, 61—see Pls. 3, 4 —; in Cemetery 2, burial 108; in Cemetery 3, burials 34, (?), 36, 39, 50).

As to the source of procurement of these points and their probable meaning in the culture pattern little beyond speculation is at present possible. In the Rochester Museum collection from the Dutch Hollow village area 13 additional points of the following types occur: eight broad, thick side-notched (four fragmentary), two narrow, side-notched, and two broad,

---

[1] "They sometimes wear on the bottom of their garments little ornaments made from Bears' Claws, that they may more easily kill these animals, and not be hurt by them." (Kenton, Vol. 1, p. 237; cf. pp. 511-512 for references to owl claw talismans.)

[2] Fenton, letter of May 5, 1953.

stemmed forms, all typical of the Laurentian Phase; and one narrow, stemmed Lamoka point. This fact may signify a local derivation by the Seneca from older components on the same ground of at least some part of the material, or the specimens from refuse and graves alike may have been gathered elsewhere on one, or more probably, several sites. I incline to the latter view and emphasize the presence among the grave finds of specimens of such exotic materials as Flint Ridge, Licking County, Ohio chalcedony (Pl. 8, fig. 7), rhyolite from the Gettysburg region of south-central Pennsylvania (Pl. 8, fig. 24) and non-local black flint (Pl. 8, figs. 15, 16) as substantial proof that the Senecas themselves were not the authors of this point series.

It can hardly be doubted that the Seneca hunters recognized in these flints the work of mysterious predecessors and that they wove about such relics a web of mythology and magic.[1] The possession in the hunter's pouch of these charms or talismans may have been regarded as powerful magic aids in hunting. It will be noted in Plate 4 that one of two groups of characteristic Seneca arrowpoints in burial 61 is associated with three of the old Laurentian javelin heads.

At the right hand of the young woman in burial 60, Cemetery 1 (Plate 3) was found a weasel skull (Pl. 12, fig. 2) closely associated with brass beads and pendants, shell and glass beads and red paint (see page 13). While these articles may have been deposited in a weasel skin pouch (perhaps a medicine bag) like that mentioned by Morgan,[2] the skull may alternatively represent the surviving remnant of a weasel charm, like the specimen in the New York State Museum (Catalogue number 37151), adorned with wampum beads and deer hoof sections, from the Cattaraugus Seneca, who are said to have regarded it as a powerful defense against evil.

Sacred or medicine bundles are still a part of the ritualistic paraphernalia of the Little Water Medicine Company, on the Seneca reservations, and witch bundles have also been described.[3] The first are believed to operate protectively, the second to facilitate the exercise of malevolent magic. Evidence for the existence of medicine bundles at Dutch Hollow is provided by burials 5, 70, 73, Cemetery 1, all pertaining to infants or children, a circumstance which would suggest a protective significance for these objects.

Burial 5, for which the data are less convincing, has already been described in sufficient detail (page 6); burials 70 and 73 (see Table 1), the first of a

---

1 The story of the stone giants may be one such tale which has survived. (Parker, 1923, pp. 394-396.) Wooden masks in the Rochester and New York State Museums representing Stone Giants, have a pre-Iroquoian flint point imbedded in the forehead. By contrast with their own small triangular arrowpoints, these much larger and heavier pre-Iroquoian points would tend to suggest to the Iroquois a greater bodily size and strength for their unknown makers.

2 Morgan, 1851, p. 380.

3 Parker, 1923, pp. 368-369.

child 7 or 8 years of age, the second of a juvenile individual approximately 16 years old, were equipped with braided leather, perhaps rawhide, pouches, at the left shoulder and near the right leg, respectively. In burial 70 the pouch, shown on Pl. 12, fig. 18, contained the following articles: bits of mammal fur; a rectangular sheet of brass, 2 x 2⅛ inches; two short, sheet brass tubular beads (⅝ x ¾ inches long, respectively, and ⅜ inch in diameter); six large discoidal shell beads (¼-¾ inch in diameter); two blue and white striped round glass beads, fused together by heat; two plain blue, two striped white on blue, and one white, glass spherical beads; and two light blue striped, on a dark blue ground, small, spherical, "star" beads. The preservation of the bag and its wrappings of bark and leather (Pl. 12, fig. 18) arises from the brass items within.

The contents of the similar pouch from burial 73 (Pl. 12, fig. 4) were nearly identical, comprising bits of mammal fur; six long, tubular, sheet brass beads (1¾-2 inches in length, all retaining bits of leather thong); five large, discoidal, shell beads and the same number of round, red glass beads.

The Relation for 1639 mentions the high regard manifested for medicine pouches among the Algonkian neighbors of the Huron and states that offerings of beads and food were made to the "familiar demon" who was believed to reside within, in propitiation for favors requested or received.[1] Fenton considers the possibility that northern Algonkian contacts were responsible for "the medicine-bundle type of shamanistic society" which is distributed from Iroquoia through the Great Lakes area to the northern Plains.[2]

On Plate 12, fig. 5, is pictured the final item to be described, pertaining to the site, and possibly to the topic under discussion. Found with burial 48 in the first cemetery, it is of loosely rolled sheet brass which has preserved within the folds fragments of plumes or large feathers and what seem to be bits of woven fabric. To the writer this artifact midly suggests a feather fan handle, but ethnological or historical parallels for a similar device have not been noted.

Chronology and Trade Relations

Despite the unfortunate fact that documentary sources afford us no direct clue to the tribal identity of the Dutch Hollow village site, the character of the native industrial remains, particularly the pottery, convincingly demonstrates its Seneca provenience. Considered typologically, and in rela-

---

1 Kenton, Vol. 1, p. 407.
2 Fenton, 1940, pp. 193-194.

tion to the kinds and quantities of European trade goods, they also provide means for the chronological assessment of the site. MacNeish's pottery seriations[1] and Wray's estimates based more particularly on stylistic considerations in trade beads and associated importations[2] closely confirm the writer's deductions of a temporal span encompassing the period of approximately 1590 to 1615. Although already stated, it is important to reaffirm the complete absence of the gun from Dutch Hollow and the apparently contemporaneous Factory Hollow village with its outlying hamlets, the Taft and Conn sites,[3] a fact which dates these settlements prior to 1630 both on historical and archeological grounds.

The recovery of so large and various an array of Caucasian artifacts at this early date in western New York will occasion some surprise and impose a difficult task in determining the means and routes of trade. In tracing the pathways of diffusion archeology remains the primary means, while concerning sources of manufacture, routes of commerce, the temporal and historical significance of observed stylistic differences in the materials, and cognate matters, much vital information is anticipated from the comprehensive investigations of Kenneth E. Kidd, already referred to.

As will presently be shown, the roots of the fur trade in North America lie farther back in history than is commonly supposed. The port of entry for the earliest European goods of the northeastern area was doubtless the St. Lawrence River, near whose mouth there developed, soon after 1500, "a great fishing industry which in turn became the mother of the fur-trade—."[4] The first knowledge of the fabulous fishing grounds later known as the Grand Banks, which lie off Newfoundland in the North Atlantic, reached Europe as the result of the voyages of John Cabot (1497) and the Corte-Reals (1500, 1501, 1502). By 1506 French fishermen were already there and two years later Flemish ships began to relieve Europe's chronic hunger. Numerous vessels out of French, Breton, Portuguese and English ports were engaged, in 1510, in taking the cod, turbot and sturgeon which teemed in these waters. As many as 50 vessels from these nations were so occupied by 1527, at which time the exploitation of the walrus herds began on the islands at the mouth of the Gulf of St. Lawrence. Soon the numerous whales frequenting the gulf and St. Lawrence River were added to the catch. Whaling seems particularly to have intrigued the Basques, for as early as 1545 they had established a base of operations far up the river near the present Tadoussac, at the mouth of the Saguenay.

About this time was discovered the excellent fishing which could be had

---

1 MacNeish, 1952.
2 Wray and Schoff, 1953, and personal communication from Mr. Wray.
3 Wray and Schoff, 1953, pp. 55-56.
4 Biggar, 1901, p. 17.

near Anticosti Island and along the shore of the Gaspé Peninsula, so the great fishing fleet began to concentrate nearer the mainland. By 1578 this fleet had grown to some 375 vessels, from Spanish, Basque, Portuguese, English, French and Breton ports, and 25 years later the French contribution alone is said to have totaled nearly double this number.[1]

It appears that the fur trade arose as a corollary of the fishing activities in the following manner. Of the two fishing practices, known respectively as "green" and "dry," the former consisted in dressing and salting the fish at sea, while the latter necessitated a permanent shore base for the anchorage of the vessels, the fishing being conducted from small boats, daily rowed out to sea, and the catch being dressed ashore and dried in sun and wind on the rocks and gravel beaches. This dry fishing technique was attended by barter with the natives which led on to an organized fur trade.[2]

"Lescarbot at the beginning of the seventeenth century notes that before the regular fur-trading companies were formed, the fishermen were in the habit of bartering with the savages in the lower parts of the river. Notices of this fur-trade are found scattered through the records of almost the whole of the sixteenth century."[3]

"Gomez, who visited the Gulf in the year 1524, brought back with him a certain quantity of furs as well as a number of Indians. He reported that the country was exceedingly rich in marten, beaver and other furs. Cartier's first contact with the savages of the mainland in 1534 certainly indicates that they had already traded in furs with Europeans. The ships had reached the Baie de Chaleur which Cartier hoped was the passage to the East, and a boat had been sent to examine the coast. On rounding a headland it came suddenly upon about 50 canoes manned by savages who were paddling toward the shore. At the sight of the boat the Indians at once made signs that the French should land, and even held up furs to them on their clubs."[4]

"On his second voyage the next year when the St. Lawrence was visited for the first time, Cartier everywhere found the Indians as familiar and as friendly as if they had known the French all their lives."[5]

This early familiarity with European traders is confirmed by the following statement in Champlain's journal: "On the twenty-sixth of the month (April, 1610) we arrived at Tadoussac, where there were ships which had arrived as early as the eighteenth. Such a thing had not been seen for sixty years, according to reports of old seamen who sail regularly to these parts."[6]

---

1 Biggar, 1901, pp. 24-25.
2 Ibid., pp. 25-26, 29.
3 Ibid., p. 29.
4 Ibid., p. 30.
5 Ibid., p. 30.
6 Biggar, 1925, p. 117. Thanks are due Mr. Alexander M. Stewart of Rochester for calling my attention to this reference.

This certainly implies an established annual trade far up the St. Lawrence as early as 1550.

It would accordingly appear from the large body of historic testimony of this sort that a very considerable amount of European goods had passed into the hands of Indians living or trading along the St. Lawrence at least as far upstream as Tadoussac during the approximate half century prior to the postulated settlement of the Seneca at Dutch Hollow.

By what means, we must next inquire, did some of this material find its way over the wide reaches of land and water separating these two regions? A few slender clues to the solution of this more difficult problem are also afforded by the documentary sources. We learn from Champlain that in 1603, at the time he and Dupont-Gravé were exploring the St. Lawrence as far as the Lachine rapids (the ship in which they had come remaining meanwhile at Tadoussac to trade with the Indians),[1] the Algonkian tribes from the Ottawa River and the Hurons from the Georgian Bay region feared to use the St. Lawrence because of Iroquoian hijacking raids on their fur-carrying canoe fleets, hence already they were approaching the trading stations on the St. Lawrence from the north, through the St. Maurice and Saguenay Rivers, via what came to be termed the "Huron Great Circle Route."[2] It is therefore obvious that prior to 1603 some still unidentifiable tribe or tribes of the New York Iroquois, by fair means or foul, were obtaining European articles on the St. Lawrence.

Apparently the pressure of these groups on the south, inspired by the appetite for trade goods, was responsible for the displacement of Algonkian tribes along the St. Lawrence, sometime before 1613, for when Champlain, on an exploring trip in that year, had reached the Alumettes, far up the Ottawa, and had communicated to their chief his intention of erecting a fortified trading post at the Lachine Rapids, they assured him that if this be done they would "lead back their nation to its old quarters there under the shelter of the French guns."[3]

One gathers that, while the earliest trade goods filtered through Algonkian hands into Huronia, the inhabitants of the latter region were able, before the dawn of the seventeenth century, to enter into direct exchange relations with the French at Three Rivers, Quebec and Tadoussac, out of which they soon developed for themselves a strong and enviable middleman status, ultimately to culminate in their destruction at the hands of the Senecas

---

1 Since Cartier's time several merchants of St. Malo had been to Tadoussac to trade. "According to the traders of St. Malo nine or ten other barques were also at the rapids (of Lachine) this year" (1603). (Biggar, 1901, p. 48.)

2 Biggar, 1901, p. 47. This route is shown on the end maps in Hunt, 1940. An earlier and much more direct route from Huronia utilized the north shore of Lake Ontario, via the Humber and Trent Rivers and Bay of Quinte. Over this course "it was only ten days' journey"—"to the trading place." (Butterfield, 1898, pp. 48-49.)

3 Biggar, 1901, p. 90.

and their allies. Champlain, in his visit of 1615, observed the extreme avarice of the Huron toward this new source of wealth and, indeed, by this time trading had become the principal occupation in their overpopulated domain. From their Petun and Neutral neighbors to the west and south, respectively, they obtained corn, corn meal, tobacco and Indian hemp fiber (some accounts mention fish-nets of this material), apparently in exchange for European goods. These agricultural products in turn were bartered for furs over the wide territory of the non-agricultural Algonkian hunters of the northern forests, primarily the Nipissing (next to the Huron, the greatest traders and travelers of the area) and the Ottawa, but even with the Chippewa and Winnebago living far to the west.[1] To accomplish these great feats of trade, Huron men spent the larger part of the year away from their villages. Archeological evidence of Huron-Nipissing cultural interchanges has recently been exposed in the top stratum of a very important multilevel site at Frank Bay, Lake Nipissing by Mr. Frank Ridley of Toronto.[2]

Through Neutral hands trade goods received from the Hurons may have passed into the adjacent Seneca country, "distant but a day's journey from the last village of the Neutral Nation,"[3] perhaps in exchange for peltry for which the Senecas had no direct barter routes to north or east. The free accession to the Neutral country is implied in the following statement contained in the Relation of 1640-41: "Our Frenchmen who were first here surnamed this Nation 'the Neutral Nation,' and not without reason; for this country being the ordinary land route of some Iroquois Tribes and of the Hurons, who are sworn enemies, they keep themselves equally in peace with both."[4]

While it cannot be shown that European traders actually penetrated into the Neutral country at a period early enough to have contributed to the economy of the Dutch Hollow village, this possibility is at least suggested by the following observation contained in the Relation of 1640-41: "Many of our Frenchmen who have been here have, in the past, made journeys in this country of the Neutral Nation for the sake of reaping profit and advantage from furs and other little wares that one might look for. But we have no knowledge of any one who has gone there for the purpose of preaching the Gospel, except the Reverend Father Joseph de la Roche Dallion, a Recollect, who in 1626 made a journey thither, and spent the winter there."[5]

The likelihood that the Neutral themselves participated directly in the fur trade with Europeans is remote. The Huron were violently opposed to

---

1 Hunt, 1940, pp. 54-55; Fenton, 1940, pp. 188-189.
2 Ridley, n.d.
3 Thwaites, Vol. 21 pp. 209-210.
4 Ibid., p. 193.
5 Ibid., p. 203. I am grateful to Mr. Alexander M. Stewart of Rochester, for bringing this reference to my notice.

any interference with their trade supremacy, as is shown by their treatment of the French priests who went among the Neutrals,[1] and "so far as is known, no Neutral ever visited the French settlements until after 1652."[2]

I am aware of no convincing documentary or other evidence tending to connect the Senecas of this period directly with the trading or raiding ventures on the St. Lawrence, although this is of course a possibility. Unrecorded visits to the Seneca canton by French traders, like those mentioned by the Jesuits among the Neutrals, may also have occurred. The presence in certain little-known Onondaga sites of glass beads and metallic goods identical with those found in western New York may imply some measure of diffusion from this quarter, especially since Oneida-Onondaga "trade" pots occur in Dutch Hollow graves. Mohawk trade connections seem least likely to have taken place since it was not until 1615-16 that an alliance between the Dutch at Fort Orange and the Iroquois Confederacy permitted extensive trade relations, although the Mohawk were obtaining firearms from this source by 1614 and had sporadic trade contacts on the Hudson River a little before this time.

Perhaps we may best conclude that while the Senecas of the opening part of the historic period had their closest and most extensive trade relations with their Iroquoian neighbors to the west (as a considerable part of the Adams, Dutch Hollow and Factory Hollow pots and pipes bear witness), they participated also in an extensive intertribal exchange of ideas and commodities for which the pattern was established in traditions reaching back into prehistoric days. In the words of Hunt, "In prehistoric North America intertribal trade, particularly in the region of the Great Lakes, was extensive and was sufficiently well developed to absorb immediately all the trade goods that could be sent from Europe."[3]

The Jesuits quickly noticed the same fact, the writer of the 1640-41 Relation observing, "Besides, of many different Nations with whom we now have acquaintance, there is not found one that has not trade or war with others more distant."[4]

---

1 Thwaites, Vol. 21, pp. 205-223; Hunt, 1940, pp. 56-57.
2 Hunt, 1940, p. 57. Fenton (1940, p. 188) also stresses their insulated immobility.
3 Ibid., pp. 21-22.
4 Thwaites, Vol. 21, p. 193.

BIBLIOGRAPHY

Beauchamp, William M.

1902 *Horn and Bone Implements of the New York Indians.* New York State Museum, Bulletin 50, Albany.

Biggar, H. P.

1901 *The Early Trading Companies of New France.* University of Toronto Library. Toronto.

1925 *The Works of Samuel De Champlain,* Vol. II (ed.). Publications of the Champlain Society. Toronto.

Bray, William L.

1930 *The Development of the Vegetation of New York State.* Technical Publication No. 29, New York State College of Forestry, Syracuse University. Syracuse.

Butterfield, Consul Willshire

1898 *History of Brule's Discoveries and Explorations, 1610-1626.* Western Reserve Historical Society. Cleveland.

Conklin, Harold C. and William C. Sturtevant

1953 "Seneca Indian Singing Tools of Coldspring Longhouse. Musical Instruments of the Modern Iroquois." *Proceedings of the American Philosophical Society,* Vol. 97, No. 3, pp. 262-290. Phila.

Fenneman, Nevin M.

1938 *Physiography of the Eastern United States.* McGraw-Hill Book Co. New York.

Fenton, William N.

1936 *An Outline of Seneca Ceremonies at Coldspring Longhouse.* Yale University Publications in Anthropology, No. 9. New Haven.

1940 "Problems Arising from the Historic Northeastern Position of the Iroquois." In, *Essays in Historical Anthropology of North America.* Smithsonian Miscellaneous Collections, Vol. 100, pp. 159-251. Wash.

1941 "Masked Medicine Societies of the Iroquois." *Smithsonian Report for 1940,* pp. 397-430. Wash.

1949 "Seth Newhouse's Traditional History and Constitution of the Iroquois Confederacy." *Proceedings of the American Philosophical Society,* Vol. 93, No. 2, pp. 141-158. Phila.

Fenton, William N. (editor)

1951 *Symposium on Local Diversity in Iroquois Culture.* Smithsonian Institution, Bureau of American Ethnology, Bulletin 149, Wash.

Fenton, William N. and John Witthoft

1951 "Iroquois Anthropology at the Mid-Century." *Proceedings of the American Philosophical Society,* Vol. 95, No. 3, pp. 296-321. Phila.

Flannery, Regina

1939 *An Analysis of Costal Algonquian Culture.* Catholic University of America, Anthropological Series, No. 7. Wash.

Grassmann, Thomas

1952 "The Mohawk-Caughnawaga Excavation." *Pennsylvania Archaeologist,* Vol. XXII, No. 1, pp. 33-36. Milton.

1952a "The Question of the Locations of Mohawk Indian Village Sites Existing During the Historic Period." *Pennsylvania Archaeologist,* Vol. XXII, Nos. 3-4, pp. 98-111. Milton.

Hanna, Charles A.

1911 *The Wilderness Trail,* Vol. 1. G. P. Putnam's Sons. New York.

Houghton, Frederick

1912 "The Seneca Nation from 1655 to 1687." *Bulletin of the Buffalo Society of Natural Sciences,* Vol. X, No. 2, pp. 363-476. Buffalo.

1922 *The Archeology of the Genesee Country.* Researches and Transactions of the New York State Archeological Association, Vol. III, No. 2, pp. 39-66. Rochester.

Hunt, George T.

1940 *The Wars of the Iroquois, A Study in Intertribal Trade Relations.* University of Wisconsin Press. Madison.

Kenton, Edna

1927 *The Indians of North America,* Vol. 1. Harcourt, Brace & Co. New York.

Kidd, Kenneth E.

1949 *The Excavation of Ste. Marie I.* University of Toronto Press. Toronto.

Knowles, Francis H. S.

1937 *Physical Anthropology of the Roebuck Iroquois, With Comparative Data from other Indian Tribes.* National Museum of Canada, Bulletin No. 87. Ottawa.

Lounsbury, Floyd G.

1953 *Oneida Verb Morphology.* Yale University Publications in Anthropology, No. 48. New Haven.

MacNeish, Richard S.

1952 *Iroquois Pottery Types. A Technique for the Study of Iroquois Prehistory.* National Museum of Canada, Bulletin No. 124. Ottawa.

Mayer, Joseph R.

1943 *Flintlocks of the Iroquois, 1620-1687.* Research Records of the Rochester Museum of Arts and Sciences, No. 6. Rochester.

Morgan, Lewis H.

1851 *League of the Ho-Dé-No-Sau-Nee or Iroquois.* Sage & Bro. Rochester.

Neumann, Georg K.

1952 "Archeology and Race in the American Indian." In, *Archeology of the Eastern United States* (James B. Griffin, ed.). University of Chicago Press, pp. 13-34. Chicago.

Orchard, William C.

1929 *Beads and Beadwork of the American Indians.* Contributions from the Museum of the American Indian, Heye Foundation, Vol. XI. New York.

Parker, Arthur C.

1907 *Excavations in an Erie Indian Village and Burial Site at Ripley, Chautauqua Co., N. Y.* New York State Museum, Bulletin 117. Albany.

1910 *Iroquois Uses of Maize and Other Food Plants.* New York State Museum, Bulletin 144. Albany.

1918 *A Prehistoric Iroquoian Site on the Reed Farm, Richmond Mills, Ontario County, N. Y.* Researches and Transactions of the New York State Archeological Association, Vol. 1, No. 1, pp. 5-41. Rochester.

1922 *The Archeological History of New York.* New York State Museum, Bulletins Nos. 235, 236. Albany.

1923 *Seneca Myths and Folk Tales.* Buffalo Historical Society Publications, Vol. 27. Buffalo.

Peterson, Ronald B.

1950 *The Mineral Industries of New York State.* State of New York, Department of Commerce. Albany.

Ridley, Frank

n.d. "The Frank Bay Site of Lake Nipissing."

Ritchie, William A.

1936 *A Prehistoric Fortified Village Site at Canandaigua, Ontario County, New York.* Research Records of the Rochester Museum of Arts and Sciences, No. 3. Rochester.

1944 *The Pre-Iroquoian Occupations of New York State.* Rochester Museum of Arts and Sciences, Memoir 1. Rochester.

1945 *An Early Site in Cayuga County, New York, Type Component of the Frontenac Focus, Archaic Pattern.* Research Records of the Rochester Museum of Arts and Sciences, No. 7. Rochester.

1951 "A Current Synthesis of New York Prehistory." *American Antiquity,* Vol. 17, No. 2, pp. 130-136. Salt Lake City.

1952 *The Chance Horizon: An Early Stage of Mohawk Iroquois Cultural Development.* New York State Museum, Circular 29. Albany.

Ritchie, William A., Donald Lenig and P. Schuyler Miller

1953 *An Early Owasco Sequence in Eastern New York.* New York State Museum, Circular 32. Albany.

Sagard, Gabriel

1939 *The Long Journey to the Country of the Hurons* (George M. Wrong, Editor). The Champlain Society. Toronto.

Snyderman, George S.

1948 "Social and Political Patterns of Iroquois Society-Warfare." *Pennsylvania Archaeologist,* Vol. XVIII, Nos. 3-4. Milton.

Speck, Frank G.

1931 *A Study of the Delaware Indian Big House Ceremony,* Vol II. Publication of the Pennsylvania Historical Commission. Harrisburg.

1945 *The Iroquois, a Study in Cultural Evolution.* Cranbrook Institute of Science, Bulletin No. 23. Bloomfield Hills.

Squier, E. G.

1851 *Antiquities of the State of New York.* Geo. H. Derby & Co. Buffalo.

Thwaites, Reuben G. (editor)

1896-1901 *The Jesuit Relations and Allied Documents.* 73 vols. Cleveland.

Wallace, Anthony F. C.

1952 *The Modal Personality Structure of the Tuscarora Indians, as Revealed by the Rorschach Test.* Smithsonian Institution, Bureau of American Ethnology, Bulletin 150. Wash.

Wallace, Paul A. W.
1948 "The Return of Hiawatha." *New York History,* Vol. 29, No. 4, pp. 385-403. Cooperstown.

Waugh, F. W.
1916 *Iroquois Foods and Food Preparation.* Canada Department of Mines, Geological Survey, Memoir 86. Ottawa.

Wray, Charles F. and H. L. Schoff
1953 "A Preliminary Report on the Location and Sequence of the Seneca Sites of 1550-1687." *Pennsylvania Archaeologist,* Vol. 23, No. 2, pp. 53-63. Milton.

Table 1. Condensed Record of the Burials in Cemetery 1.

(Rochester Museum of Arts and Sciences Excavations)

Field and catalogue nos.[1]	Depth below surface (in inches)	Grave dimensions (in inches)	Orientation			Sex and approximate age in years[2]	Condition[3]	Burial accompaniments with catalogue nos.[4]	Remarks
			Face	Skull top	Side				
1	24	36x24	N	SE	R	♀, 16	G	Several hundred small discoidal shell beads about neck.	Infant skeleton above left shoulder.
2	30	40x22	E	SW	R	♀, A	P	N	Perforated olecranon fossae.
3 (AP 337)	40	49x41	NW	E	L	♀, 28	G	N	Skeleton covered with large boulders.
5[5]	—	—	—	—	—	—	—	———	See description in text, p. 6
6 (AP 350)	32	?	NW	NE	R	♀, 28	G	N	Covered with flat stones.
7	30	?	?	?	R	?, A	G	Crushed pottery vessel (AR 27748).	Partly excavated grave looted by vandals during night. Arthritic lesions on vertebrae. See Pl. 27, fig. 1.
8	12	?	E	NW	L	?, 10	P	Glass beads (AR 27755) and pottery fragments near face.	See Pl. 15, fig. 1.
9	—	—	—	—	—	—	—	———	See description in text, p. 7
10 (AP 352)	48	41x30	E	NW	R	♂, 35	F	Berry seeds among sherds of badly crushed pot.	
11	41	?	E	S	R	♀, A	P	N	
12	25	?	S	W	R(?)	?, C	P	25 blue and white oblate spheroidal beads and 2 tubular copper beads (AR 27758) near neck.	Only skull fragments and few tooth crowns left. See Pl. 16, fig. 7.
13	21	?	N	W	L	♀, S	P	N	See burial 16.
14	32	42x24	N	W	L	♂, S	P	Small quantity of red ochre near face. Triangular arrowpoint (AR 27759) near shoulder.	See Pl. 7, fig. 14.
15	20	29x20	N	W	L	?, C	P	N	
16	22	?	N	W	L	♀, A	P	N	Lay below and beside number 13, separated by thin sand layer. Evidently in same grave.
17	36	?	?	?	R	?, A	P	N	

18	24	28 (length)	?	?	?	?, C	P	Glass beads at south end and 2 pottery vessels (AR 27760-61) at north end of grave.	Only tooth crowns remained in south end. See Pl. 23, fig. 2; Pl. 30, fig. 1.
19	17	34x30	?	?	?	?	P	c. 60 blue and white glass beads (AR 27762) and crushed pot (AR 27763).	No trace of skeleton. See Pl. 15, fig. 5; Pl. 30, fig. 2.
20	38	?	?	?	?	?	P	Blue and red glass beads (AR 27764).	Few much decayed bone fragments. See Pl. 16, fig. 5.
22	54	?	NE	NW	L	?, J	P	Small discoidal and native wampum beads (AR 27765) at neck. Rubbed hematite paintstone (AR 27768) under shoulder. Iron knife in wooden handle, 8″ in length (AR 27766) and owl bones, fragmentary turkey humerus and 2 phalanges of small mammal, (AR 27767) behind hips. 3 triangular arrowpoints behind feet.	Soil hard clay and gravel. See Pl. 17, fig. 4; Pl. 14, fig. 9; Pl. 9, fig. 4.
23	29	24x20	?	SW	?	?, C	P	Few glass beads (AR 27778) near teeth. Two pottery vessels (AR 27769-70) near foot of grave.	Only tooth crowns remained. Black earth below plow line in upper grave fill. See Pl. 16, fig. 1; Pl. 24, fig. 1; Pl. 29, fig. 3.
24	51	?	S	W	R	?, A	P	Crushed pot (AR 27744) before face.	Grave covered with 4″ layer of white claylike wash.
25	41	47 (length)	N	W	L	?, A	P	N	Fill flecked with charcoal fragments. Cobblestones over bones.
26	—	—	—	—	—	—	—	———	See description in text, p. 7
29	60	?	W	NE	R	?, A	P	N	
30 (AP 339)	44	40x32	N	E	R	♀, 24	G	Pottery jar (AR 27773) behind skull. Skeleton of large duck (sp?) (AR 42257) beside pot. Two owl claw cores before face.	See Pl. 23, fig. 3.
31	—	—	—	—	—	—	—	———	See description in text, p. 7
32	26	41x41	W	N	R	♂, A	F	N	
33	39	42x42	S	W	R	♀, 19	G	N	Soil stony. Much stain in fill and over grave.
34	31	40x24	N	W	R	♀?, 17	P	Small spheroidal glass beads (AR 27918) and owl claw cores near head. One claw core near right foot. Crushed pot over knees.	See Pl. 16, fig. 10.
35a	38	48x48	Up	E	R	♀, A	P	Crushed pot (AR 27934) between skeletons at hips.	Double burial, side by side. Small boulders over bones. Sand fill very dark throughout grave. See Pl. 28, fig. 2.
35b	38	48x48	Up	E	L	♀, A	P		
36 (AP 343)	—	—	—	—	—	—	—	———	See description in text, p. 7

Field and catalogue nos.[1]	Depth below surface (in inches)	Grave dimensions (in inches)	Orientation			Sex and approximate age in years[2]	Condition[3]	Burial accompaniments with catalogue nos.[4]	Remarks
			Face	Skull top	Side				
37	31	?	N	W	L	?, C	F	Cut piece of sheet brass behind shoulder. 2 small blue glass beads on upper arm.	
38a	—	—	—	—	—	—	—	———	See description in text, p. 8
38b	—	—	—	—	—	—	—	———	See description in text, p. 8
38c	—	—	—	—	—	—	—	———	See description in text, p. 8
39 (AP 355)	—	—	—	—	—	—	—	———	See description in text, p. 8
40 (AP 363)	—	—	—	—	—	—	—	———	See description in text, p. 8
41	—	—	—	—	—	—	—	———	See description in text, p. 9
43 (AP 348)	30	54x32	SE	NE	L	♂, 65	P	4 triangular arrowpoints (AR 27804) around skull. Flat pebble whetstone (AR 27805) resting on unworked *Unio* shell lay on skull. Bone harpoon (AR 27803) behind skull. Flint scraper (AR 27806) in grave.	Arthritic lipping on vertebrae. See Pl. 7, figs. 10, 11, 16, 32; Pl. 9, fig. 28.
44	35	?	SW	NW	Back	♀ ?, A	P	Turtle shell (AR 27807) near face. Deer bone at heels.	See Pl. 10, fig. 4.
45	47	?	NW	SW	L	?, I	P	5 triangular arrowpoints (AR 27808), bear claw core, flat stone.	See Pl. 7, figs. 5-9.
46	30	46x33	NE	NW	L	?, J	P	Antler flaking tool (AR 27810) near face. Black and white striped beads (AR 27809) near elbow.	Small stones over bones. See Pl. 9, fig. 27.
47	27	40x29	NE	NW	L	?, A	P	Box turtle rattle (AR 27811), vasiform stone pipe (AR 27812), and cut anterior section of bear skull (AR 27832) before face. Heap of bird bones at knees.	Dark band over grave near surface. Skeleton covered with layer of claylike wash. See Pl. 10, figs. 2, 7; Pl. 19, fig. 1.
48 (AP 347, 356)	—	—	—	—	—	—	—	———	See description in text, p. 9
49 (AP 345)	—	—	—	—	—	—	—	———	See description in text, p. 10
50	19	30x30	N	W	L	?, C	F	Crushed pottery vessel (AR 27747) behind skull.	See Pl. 23, fig. 1.
51	14	42x42	SW	SE	L	♀, S	P	Behind back lay pottery vessel (AR 29370) crushed by rocks. Pot contained iron wedge or scraper (AR 27829), fragments of wooden ladle (AR 27831), bits of fabric and leather, and 2 brass rings with attached leather thongs (AR 27830). Bones of 2 complete deer forelegs lay across face.	See Pl. 24, fig. 2; Pl. 14, fig. 2; Pl. 12, fig. 25.

52	16	34x24	E	N	L	?, C	P	N	
53	27	36x24	SW	NE	R	♀, S	P	Inverted pottery vessel (AR 27833) near elbows.	See Pl. 28, fig. 1.
54	32	?	NW	E	R	♀, A	P	Crushed pot (AR 27835) covered with flat rock and containing numerous bird bones at left pelvis. At heels, two pots, one (AR 27834) inside the other (AR 27836), partly crushed by flat rock on top. Iron axe (AR 27837) over knees.	See Pl. 24, fig. 3; Pl. 25, fig. 1; Pl. 26, fig. 4.
55 (AP 341)	23	44x44	SE	SW	R	♂, 30	F	2 bear claw cores (AR 42328) behind skull. Wing bones wild turkey (AR 42259) under chest, leg bones same species (AR 42259) under feet. Small iron axe near middle of calf of left leg.	See Pl. 9, fig. 11; Pl. 14, fig. 16.
56 (AP 342)	—	—	—	—	—	—	—	———	See description in text, p. 10
57	34	?	N	W	L	♂, A	F	N	Numerous large and small boulders over skeleton. See Pl. 2.
58 (AP 349)	15	39x36	S	W	R	♂, 70	F	One triangular arrowpoint.	
59	16	48x30	N	W	L	♂, A	G	Effigy pipe (AR 27838) on right arm.	See Pl. 19, fig. 2.
60 (AP 346, 338)	—	—	—	—	—	—	—	———	See description in text, p. 10
61 (AP 344)	—	—	—	—	—	—	—	———	See description in text, p. 15
62	9	?	S	E	Back	?, C	P	11 large polychrome beads and 3 large irregular conch shell beads (AR 27864) at neck. Rude chisel-like stone implement (AR 27865) behind skull. Triangular arrowpoint (AR 27866) in grave.	See Pl. 15, fig. 3; Pl. 7, fig. 31
63 (AP 353)	36	42x30	E	N	L	♀, 42	G	Small blue glass beads (AR 27867), crushed pot (AR 27745), deer leg bones (AR 27868).	See Pl. 16, fig. 9; Pl. 30, fig. 3.
64 (AP 340)	28	?	N	W	L	♀, 40	G	N	
65 (AP 354)	30	?	S	E	L	♀ ?, J	P	Three bear claw cores (AR 42261) near ankle. Rough slab of hematite, 6″ in diameter, on heap of berry seeds near hips.	
66 (AP 351)	33	43x28	NW	SW	R	♂, 60	P	N	
67	—	—	—	—	—	—	—	———	See description in text, p. 16
68	—	—	—	—	—	—	—	———	See description in text, p. 17
69	—	—	—	—	—	—	—	———	See description in text, p. 18

Field and catalogue nos.[1]	Depth below surface (in inches)	Grave dimensions (in inches)	Orientation			Sex and approximate age in years[2]	Condition[3]	Burial accompaniments with catalogue nos.[4]	Remarks
			Face	Skull top	Side				
70	25	?	NE	NW	L	?, C	G	Remains of pouch made of braided leather thongs and containing round glass and shell disk beads, bits of fur, and a scrap of sheet brass (AR 27900) lay between sheets of bark (AR 42265) behind left shoulder.	See Pl. 12, figs. 3, 18.
71	24	?	N	W	L	?, C	P	N	Grave lay adjacent to number 70.
72a	24	?	N	W	L	?, C	P	N	Lay beside 72b apparently in the same grave.
72b (AP 357)	31	?	N	W	L	♂, 60	P	N	Arthritic lesions on cervical vertebrae.
73	43	36x36	S	W	R	♂?, J	P	Badly decayed turtle shell rattle over left elbow. Iron axe (AR 27902) at back. Braided leather thong pouch containing discoidal shell beads, brass beads, round red glass beads and bits of fur (AR 27901) next to right leg. Glass beads (AR 27903) scattered in grave fill. Small pot (AR 27904) about 8″ above bones, between knees and left elbow.	See Pl. 12, fig. 4; Pl. 16, fig. 8; Pl. 27, fig. 2.
74	18	18x18	S	W	R	?, I	P	4 green-stained unworked raccoon splanchnic bones (AR 27905), 3 perforated sheet brass diskiform pendants (AR 27906), 2 sheet brass finger rings (AR 27908), 2 cylindrical sheet brass beads and 1 tubular bone bead on leather thong (AR 27909), one spiral brass wire bead on leather thong (AR 27907), one perforated elk canine tooth (AR 27910), large and small glass beads and thin discoidal shell beads (AR 27911).	See Pl. 9, fig. 6 (right); Pl. 12, figs. 11, 15, 17, 24; Pl. 16, fig. 12; Pl. 17, fig. 2.
75	24	36x30	SE	SW	R	♀, S	P	Iron axe (AR 27913) against middle of back. Glass beads (AR 27912) near neck.	Numerous flint chips around right hand. Sacrum ankylosed to 5th lumbar vertebra. See Pl. 14, fig. 14; Pl. 15, fig. 7.

[1]All catalogue numbers pertain to Rochester Museum of Arts and Sciences. AP = physical anthropology collections, AR = archeology collections.
[2]Age groups are defined as follows: infant (symbolized by I), 1 to 3 years; child (C), 4 to 12 years; juvenile (J), 13 to 18 years; adult (A), 19 to 50 years; senile (S), over 50 years. Age of immature individuals has been estimated from state of eruption of dentition and fusion of epiphyses; of mature individuals from degree of dental attrition, occlusion of cranial sutures and, in some cases, growth changes in the pubic symphysis (see Todd, 1920, pp. 285-334).
[3]G = good, F = fair, P = poor.
[4]N = none.
[5]Cemetery 1 was excavated in sections with a group of grave numbers assigned to each. For various reasons numbers 4, 21, 27, 28, 42 were not used.

Table 2. Condensed Record of the Burials in Cemetery 2.

(Robert R. Hill Excavations)

Field and catalogue nos.	Depth below surface (in inches)	Grave dimensions (in inches)	Orientation			Sex and approximate age in years	Condition	Burial accompaniments with catalogue nos.	Remarks
			Face	Skull top	Side				
1	?	?	?	?	?	C	P	17 glass beads and pot fragments	Greatly disturbed by woodchucks.
2	?	?	S	W	R	A	P	36 glass beads, 3 brass beads, 1 brass fringe ornament, part of double comb of wood.	
3	?	?	N	E	R	A	P	One glass bead.	
4, 5	?	?	?	?	?	?	?	N	Only stain at grave bottom.
6	?	?	?	S	?	A	P	N	
7	?	?	?	W	?	A	P	One brass bead.	
8	?	?	S	W	R	A	P	933 glass beads in neck region, several pieces hematite and berry seeds before face.	
9	?	?	S	W	R	A	P	397 glass beads in neck region.	
10	?	?	S	W	R	J	P	Crushed pot before face.	See Plate 20, fig. 3.
11	?	?	E	N	L	C	P	Intact pot before face, 5 brass fringe ornaments, 7 brass pendants along east wall.	
12	?	?	S	E	L	A	P	Effigy clay pipe before face.	See Plate 13, fig. 14.
13	?	?	?	?	?	?	?	N	Only stain at grave bottom.
14	?	?	S	W	R	A	P	Large pottery vessel front of face.	
15	?	?	S	E	L	J	P	Small clay pot before face.	
16	?	?	S	W	R	C	F	Glass beads about neck.	
17	?	?	S	W	R	A	F	N	
18	36	24x14	E	S	R	C	F	Numerous glass, brass and wampum beads around neck and shoulders. Berry seeds in north end of grave.	
19	?	?	?	W	?	?	P	Glass beads around head area of both burials.	Double burial. Two groups of tooth crowns only remained.

Field and catalogue nos.	Depth below surface (in inches)	Grave dimensions (in inches)	Orientation			Sex and approximate age in years	Condition	Burial accompaniments with catalogue nos.	Remarks
			Face	Skull top	Side				
20	?	?	E	N	L	C	P	N	
21	?	?	S	W	R	♂, A	G	Large pot before face, another at knees. Band of brass beads bordered by large glass "star" beads across forehead and extending down to chest. Bits of feather and human hair preserved. Hematite and graphite paintstones, 3 whetstones, 2 iron knives, 3 iron awls, and heap of pebbles perhaps from bark rattle along south grave wall.	
22	?	?	S	W	R	A	P	N	
23	?	?	S	W	R	C	P	Inverted clay pot before face. One brass fringe ornament (?), 1 brass hawk bell, 1 whetstone, 1 flint blank along west wall.	
24	?	?	S	W	R	A	P	Much decayed bear jaws and teeth behind skull. Two brass disk pendants front of face.	
25	25	36x23	N	W	L	C	F	Small pot before face.	
26	?	?	SW	NW	R	A	?	Rimless pottery vessel (broken edges smoothed off) containing berry seeds front of face.	
27	?	?	W	N	R	A	?	Iron knife at right shoulder, iron axe at knees.	
28	?	?	?	?	?	?	P	Clay pot.	Only stain at grave bottom.
29	?	?	E	N	L	A	?	Clay pot before face, many glass beads and heap of berry seeds nearby.	
30	?	?	E	S	R	C	?	Pottery vessel before face.	
31	?	?	?	?	?	?	P	Glass beads.	Only stain at grave bottom.
32	?	?	?	?	?	?	P	10 large glass "star" beads.	Only stain at grave bottom.
33	?	?	E	S	R	A	?	Pottery vessel front of face.	
34	?	?	?	?	?	?	P	N	Only stain at grave bottom.
35	?	?	W	N	R	A	?	N	
36	?	?	N	W	L	A	?	Clay pot before face.	
37	?	?	E	S	R	A	?	N	
38	?	?	S	W	R	A	?	N	

39	?	?	E	S	R	A	?	N	
40	?	?	N	E	R	A	?	N	
41	?	?	W	S	L	A	?	One arrowpoint.	
42	?	?	S	E	L	C	?	7 brass pendants, 4 brass fringe ornaments, 2 raccoon penis bones.	See Plate 13, figs. 6-8.
43	?	?	W	N	R	C	?	Clay pot before face.	
44	?	?	?	?	?	?	P	N	Only stain on grave bottom.
45	?	?	S	W	R	A	?	N	
46	33	20x16	?	?	?	C?	P	One brass fringe ornament (?).	Much woodchuck disturbance.
47	62	40x28	N	W	L	A	?	N	
48	61	42x31	N	W	L	A	?	412 glass beads, iron knife, 15 arrowpoints, 8 flint cores, 3 whetstones, paint, scrap of iron.	
49	50	35x26	S	E	L	A	?	Small pot inside large pot before face, 2 brass pendants and glass beads in neck region.	
50	48	47x34	NE	NW	L	A	?	Iron axe; brass bead over right ear.	
51	63	36x26	N	W	L	A	?	Iron axe.	
52	49	42x30	S	W	R	A	?	Heap of berry seeds before face.	
53	58	40x28	N	WNW	L	?	?	N	
54	54	20x20	?	?	?	?	?	N	
55	50	40x26	N	W	L	?	?	Broken pot containing sumac (?) seeds and deer bones; arrowpoint; stone pestle (?) at foot of grave.	
56	50	?	?	E	?	?	?	7 triangular arrowpoints, flint core, beaver incisor.	
57	45	20x16	S	E	L	?	?	N	
58	62	50x38	N	E	R	?	?	Iron axe.	
59	60	40x33	S	W	R	?	?	N	
60	48	22x22	E	N	L	?	?	2 pottery vessels.	
61	54	47x36	?	NW	?	?	?	Pipe and iron axe.	
62	46	46x38	N	E	R	?	F	N	
63	60	36x36	?	?	?	?	?	N	

Field and catalogue nos.	Depth below surface (in inches)	Grave dimensions (in inches)	Orientation			Sex and approximate age in years	Condition	Burial accompaniments with catalogue nos.	Remarks
			Face	Skull top	Side				
64	32	35x26	E	S	R	J	?	N	
65	46	24x16	SE	NE	L	?	?	Bracelet of 12 beads. Broken pot containing berry seeds, brass pipe bowl lining and small round stone before face.	
—	38	36x24	W	S	L	C	P	Pot before face. Blue and white tubular glass beads.	Dug by another collector.
66	60	37x26	S	W	R	C	?	Pottery vessel (7-66) and brass kettle before face. Discoidal shell, wampum and glass beads, and brass bell near kettle.	
67	61	37x32	S	E	L	C	?	Many glass beads (7-67) around skull. Clay pot at knees, also brass kettle containing squash (?) seeds. Another clay pot and 16 flint cores at right hip.	See Plate 20, fig. 1.
68	54	50x36	E	N	L	A	?	N	
69	54	31x30	?	?	?	?	?	N	
70	72	40x38	?	NW	?	?	?	Pottery vessel (7-70/1) front of face. Berry seeds near by. Iron axe, brass fringe ornament (?), raccoon penis bones, antler gaming disks, 22 pre-Iroquoian projectile points (2-23), flint core, rolled sheet brass bracelet, brass beads near jaw. Red and blue glass "seed" beads around skull.	See Plate 8, figs. 11-14, 17, 19-35.
71	38	34x22	?	?	?	?	?	N	
72	64	26x22	SE	SW	R	?	?	Crushed pot before face. Whole pot near by. Another with broken rim behind skull.	
73	44	24x20	N	W	L	?	?	Crushed pot front of face. Glass "seed" beads and 2 large beads scattered around skull.	See Plate 21, fig. 1.
74	65	49x37	SE	SW	R	A	?	N	
75	45	30x30	?	?	?	?	P	Pottery vessel (7-75/1). 3 brass pendants, pewter (?) pendant, wampum beads, preserved deer and other mammal skin and hair.	No bone remains.
76	?	32x29	S	W	R	?	?	Pot behind skull, stone pendant (7-76/2), stone fishhook effigy pendant (?) (3), brass conical ornament before face. Numerous small beads scattered about head and shoulders.	See Plate 13, figs. 1, 2.
77	49	36x31	E	S	R	?	F	Pipe below jaw.	

78	?	50x39	E	S	R	?	?	Crushed pot (7-78/1) before face. 3 arrowpoints, 2 flint cores, a whetstone, 2 paintstones, a ring-bowl clay pipe (10), an iron knife, an iron awl.	See Plate 13, fig. 15.
79	50	26x24	?	?	?	?	?	15 glass beads (7-79/1).	
80	60	42x36	?	?	?	♀, A	?	Iron axe and berry seeds.	
81	61	49x38	?	?	?	A	?	N	
82	63	55x46	?	?	?	?	?	White glass "seed" beads around skull. Turtle shell rattle, conical brass fringe ornament (?), white and blue beads at right shoulder.	
83	49	43x41	?	W	?	?	?	N	
84	49	44x38	SE	SW	R	?	?	N	
85	59	48x36	E	N	L	♂, A	?	N	
86	68	43x33	W	N	R	♂, A	?	N	
87	58	41x27	?	W	?	?	?	Pottery vessel (7-87/2) and iron axe (1).	
88	42	33x25	?	?	?	?	?	2 crushed pottery vessels (7-88/1, 2)	No bone left. See Plate 21, fig. 3.
89	50	34x28	?	?	?	?	?	N	No osseous remains.
90	51	29x19	?	?	?	?	?	Crushed pot (7-90/1).	
91	53	37x34	?	?	?	?	?	Beads along north half of wall.	
92	52	48x38	N	W	L	?	?	Iron axe (7-91/1).	
93	56	28x24	?	?	?	?	?	Small pot (7-93/2), numerous large beads (1).	No trace of bone.
94	73	46x24	?	?	?	?	?	Brass kettle had preserved bark lining along west wall.	
95	?	38x31	?	?	?	?	?	N	No trace of bone.
96	40	24x20	?	?	?	?	?	N	Destroyed by woodchucks.
97	58	37x27	S	W	R	?	?	Pottery vessel (7-97/1).	
98	47	40x21	?	NW	?	?	?	Iron axe (7-98/1).	
99	46	38x28	?	?	?	?	?	Large and small glass beads (7-99/1, 3) among teeth. Crushed pot (2).	Only teeth remained.
100	45	37x21	?	?	?	?	?	Intact pot (7-100/2), large and small glass beads (1, 3).	

Field and catalogue nos.	Depth below surface (in inches)	Grave dimensions (in inches)	Orientation			Sex and approximate age in years	Condition	Burial accompaniments with catalogue nos.	Remarks
			Face	Skull top	Side				
101	43	40x22	S	W	R	?	?	Glass beads (7-101/2) about neck. Band of large glass beads (3) across forehead. Pot (1) in grave corner. 2 paintstones (4, 5) and 6 flint cores (6-11) on top of skull. Mass of bark, deer and beaver hair, and leather of grave wrappings preserved by 3 brass pendants (12-14) and 6 large brass conical ornaments (15-20), 3 raccoon penis bones (23), small glass beads (21), fragmentary wooden spoon (22, 23) and plum pit among wrapping.	See Plate 13, figs. 3, 10.
102	50	37x28	S	W	R	?	P	Scrap of sheet brass (7-102/1) and iron blade (2) at right shoulder. 3 pre-Iroquois type projectile points (3-5), iron awl (6).	See Plate 8, figs. 7-9.
103	?	?	?	?	?	?	?	?	
104	45	47x36	W	S	L	?	?	Small blue, red striped beads and brass scrap at wrist. Crushed pot.	
105	40	36x26	W	S	L	?	?	N	
106	52	45x40	S	E	L	?	?	Gaming disks and beads.	
107	?	?	S	W	R	A	?	Perfect pot in front of face.	See Plate 21, fig. 2.
108	?	?	?	?	?	♂, A	?	One triangular, one notched point.	See Plate 8, fig. 10.
109	54	?	S	W	R	A	?	N	
110-112	?	?	?	?	?	A	?	N	
113	?	?	?	?	?	C	?	N	
114	30	24x24	?	?	?	?	?	2 pottery pipes (7-114/1,2), 7 arrowpoints (3-9), 2 flint cores (10, 11) whetstone (12), numerous glass beads near neck, red ocher at left shoulder.	See Plate 13, fig. 13.
115	?	?	?	?	?	A	?	Many glass beads, single slate bead, red ocher before face.	
116	?	?	S	W	R	A	?	Triangular arrowpoint, paintstone, iron scrap behind skull.	
117	?	?	?	W	?	A	?	N	
118-119	?	?	?	?	?	?	?	?	
120	35	37x34		E	L	A	?	N	

121	58	50x35	S	W	R	A	?	Pottery vessel before face.	See Plate 22, fig. 1.
122	60	42x36	S	N	?	♀, A	?	Iron axe and berry seeds.	

Table 3. Condensed Record of the Burials in Cemetery 3.

(Robert R. Hill Excavations)

Field and catalogue nos.	Depth below surface (in inches)	Grave dimensions (in inches)	Orientation			Sex and approximate age in years	Condition	Burial accompaniments with catalogue nos.	Remarks
			Face	Skull top	Side				
1	?	?	S	W	R	A	?	N	Tightly flexed.
2	?	?	S	W	R	A & C	?	Berry seeds at child's hips.	Tightly flexed.
3	31	35x27	E	S	R	A	?	N	Tightly flexed.
4	?	?	N?	W?	?	?	P	Clay pot.	
5	?	?	?	W?	?	C	P	N	
6	32	27x19	S?	W	?	C	P	Numerous glass beads, one brass pendant.	
7	25	38x27	S	W	R	♀, S	?	Clay pot at knees.	Tightly flexed.
8	29	28x19	?	W	?	C	?	Clay pot (7-8/5), berry seeds, beads (4) around skull, stone muller (?) (2), brass bead (3), brass hawk bell (1).	See Plate 13, fig. 9.
9	37	42x33	SE	SW	R	♀, A	?	Broken pot over knees, antler comb at elbows, glass beads at neck.	Tightly flexed.
10	30	33x33	SE	SW	R	A	?	N	Tightly flexed.
11	37	40x32	SE	SW	R	A	?	N	
12	34	24x19	?	?	?	?	P	N	No bones remained.
13	27	34x25	S	W	R	J	?	N	Tightly flexed.
14	25	22x14	?	?	?	I	P	N	
15	20	33x25	?	?	?	?	P	N	No osseous remains.
16a	29	34x31	E	S	R	C	?	N	Double burial.
16b	29	34x31	W	S	L	C	?	N	Both tightly flexed.
17	33	41x33	S	W	R	A	P	Clay pot before face.	

Field and catalogue nos.	Depth below surface (in inches)	Grave dimensions (in inches)	Orientation			Sex and approximate age in years	Condition	Burial accompaniments with catalogue nos.	Remarks
			Face	Skull top	Side				
18	38	26x23	SE	SW	R	A	P	Pottery vessel before face. Nearby iron knife, hematite paintstone.	Tightly flexed.
19	32	45x32	S	W	R	A	P	10 beads.	Disturbed by woodchuck.
20	31	60x33	N	W	L	♀, A	G	Wampum beads on right wrist.	
21	24	33x29	?	?	?	?	P	Clay pot and white glass beads.	No bones present.
22	14	33x27	W	N	R	♀, A	G	Clay pot (7-22/1) before face. Numerous glass beads around neck and along right upper arm. Antler comb at right elbow. Broken brass kettle over legs. Near leg bones were traces of infant skeleton accompanied by 2 large brass pendants, 2 antler figurines, several glass beads.	Double burial. See Plate 20, fig. 2.
23	21	30x26	W	N	R	A	P	8 beads in grave fill.	
24	18	17x17	?	?	?	?	P	Small beads in fill.	No bone present.
25	27	36x24	S	W	R	C	?	Clay pot over skull; 2 more before face. 2 brass pendants, 1 brass conical ornament, 2 perforated elk canines at neck.	
26	33	40x33	S	W	R	♀, S	F	N	
27	19	33x23	?	?	?	?	P	N	No bone present.
28	15	38x29	W	S	L	♂, A	P	Pottery vessel over knees. Bone awl, unworked deer bones, one-half *Unio* shell behind skull.	
29	23	32x24	NE	SE	R	♀, A	P	N	
30	13	30x20	E	S	R	I	?	2 pots before face.	
31	18	24x13	?	?	?	?	P	N	No bone present.
32	25	24x16	?	?	?	?	P	N	No bone present.
33	20	28x19	S	W	R	C	P	Clay pot.	Only tooth crowns remained.
34	30	48x38	SE	SW	R	♂, A	?	Antler flaking tool and whetstone under skull. Ocher at chin. Turtle shell rattle before face. Beads at left wrist.	
35	12	26x21	?	?	?	?	?	N	No bones present.

36	27	38x29	N	W	L	♂, A	P	3 pre-Iroquois type projectile points, beaver incisor, antler flaking tool, whetstone, hematite and graphite paintstones at left shoulder. Bear (?) leg bones before face.	See Plate 8, figs. 3, 4.
37	20	21x20	?	?	?	?	?	N	No bones present.
38	18	22x16	?	W	?	C	?	Clay pot (7-38/1), discoidal stone (2), fish bones in S.E. corner. Red ocher, conical brass ornament (3), brass bead (4), brass pendant (5), and glass bead (6) in N.W. corner.	
39	38	41x27	S	W	R	♂, S	G	2 pre-Iroquois type projectile points at knees. Bones from bear paw at elbow.	Tightly flexed. See Plate 8, figs. 15, 16.
40	20	20x17	?	?	?	?	P	One sheet brass bead.	No bones present.
41	28	21x16	?	?	?	C	P	Clay pot. Numerous glass "seed" beads around skull.	
42	24	47x29	S	W	R	♂, A	F	N	
43	13	30x16	NW	SW	L	C	P	Numerous glass beads about neck. 4 antler gaming disks, bear canine, deer scapula before face. Crushed pot near grave wall.	
44	17	23x19	N	W	L	C	P	N	
45	23	29x26	?	?	?	?	P	N	No bones present.
46	16	20x14	S	W	R	I	F	N	
47	14	28x17	S	W	R	I	P	Clay pot before face.	
48	26	47x38	N	E	R	♂, A	F	N	
49	14	28x18	N	W	L	I	P	Glass "seed" beads in grave fill. Iron implement before face.	
50	27	?	N	W	L	♂, A	F	Iron axe (7-50/1), oval flint knife (2), pre-Iroquois type point (3), whetstone (4), 3 flint cores (5-7).	Upper part of skeleton disturbed. See Plate 8, figs. 1, 2.
51	21	21x18	?	?	?	?	P	Clay pot (7-51/1) in N.E. corner. Glass beads scattered over entire grave bottom.	No osseous remains.
52	19	20x18	?	?	?	?	P	N	No osseous remains.
53	21	29x24	?	?	?	A (?)	P	Clay pot in N.W. corner.	Tooth crowns only remained.

Table 4. Condensed Record of the Burials in Cemeteries 4 and 5, and in Village Area.

(Robert R. Hill Excavations)

Field and catalogue nos.	Depth below surface (in inches)	Grave dimensions (in inches)	Orientation			Sex and approximate age in years	Condition	Burial accompaniments with catalogue nos.	Remarks
			Face	Skull top	Side				
CEMETERY 4									
1	14	17x11	Up	E	Supine	I	G	N	
2a	20	29x23	NW	SW	L	I	G	N	Double burial.
2b	20	29x23	SE	SW	R	C	G	N	
3	45	40x33	S	E	L	♂, S	G	N	
4	24	21x16	SE	SW	R	C	G	Pottery jar inverted over skull like hat.	Several rocks. (5-10 inches in diameter) just above bones.
5	37	38x32	N	W	L	♀, S	G	N	
6	36	49x35	NE	NW	L	♂, S	G	N	
7	37	37x28	E	S	R	♀, A	G	Broken pottery vessel and mass of berry seeds before face.	
8	38	39x31	S	E	L	♀, S	?	Pottery vessel before face.	
CEMETERY 5									
1	39	42x34	N	W	L	A	P	N	
2	36	39x31	W	S	L	A	P	N	
3	34	40x33	SW	SE	L	A	P	Pottery vessel near center.	
4	15	18x18	NW	NE	R	C	G	N	Considerable charcoal and wood ashes around sksleton.
5	38	42x35	N	W	L	A	P	Clay pipe and pebbles from decayed rattle at center of north wall.	
6	41	48x34	S	W	R	A	P	N	
7	35	40x32	SW	SE	L	C	P	Clay pot at center.	
8	27	23x15	?	?	?	C	P	Numerous glass beads, intact brass kettle, partly decayed turtle shell rattle.	Only tooth crowns present.

VILLAGE AREA A	41	27x17	S	W	R	C	G	2 pieces cut sheet brass and half a *Unio* shell over feet. Berry seeds at feet. 9 water-smoothed pebbles used as hammer, anvil and whetstones, and bones of rabbit (?) over legs. 2 clay pots over chest. Smaller pot contained squirrel (?) bones. Partly finished antler comb, 9 antler gaming disks, shell pendant, limonite paintstone, glass and shell beads before face. Numerous glass "seed" beads over shoulder, both forearms and above skull. Large glass beads about neck. Wampum beads, 2 brass pendants, perforated bear canine, perforated dog canine, os penis of mink (?), and discoidal shell beads under skull.	Tightly flexed. In village area of site. Grave found under an ash pit 40″ in diameter and 23″ deep. Pit fill undisturbed. May have been interred under house floor.
B	43	60x55	N	S	Supine	♂?, A	G	Many glass beads about neck and across shoulders. Brass hawk bell, discoidal shell beads, glass beads and red ocher near right shoulder. Triangular arrowpoint and flint scraper at right elbow. Many "seed" beads along left upper arm. Broken brass kettle preserving wooden comb and section of grave lining of bark and deer skin near left arm. Vasiform stone pipe nearby. Dog skeleton along west wall.	
C-F	—	—	—	—	—	—	—	N	No notes.

Table 5. Distribution of Grave Goods in Cemetery 1.

Total number of individuals 81	Grave goods absent		Grave goods present		Personal ornaments only	
	Number	Percentile	Number	Percentile	Number	Percentile
Senile ♂ (over 50 years)	1	1.2	0	0		
Senile ♀ (over 50 years)	1	1.2	2	2.5		
Adult ♂ (19-50 years)	5	6.1	11	13.5		
Adult ♀ (19-50 years)	5	6.1	14	17.2		
Adult, sex indeterminate	3	3.7	3	3.7		
Juvenile (13-18 years)	0	0	5	6.2	1	1.2
Child (4-12 years)	4	5.0	15	18.5	1	1.2
Infant (to 3 years)	3*	3.7	5	6.2	0	0
Age indeterminate	0	0	1	1.2	1	1.2
Totals	22	27.0	56	69.0	3	3.6

*Fetus or new born accompanying young females in burials 1, 56, 60.

Table 6. Pottery Distribution, Dutch Hollow Burials

Type	Cat. No.	Provenience	Illustrations	Probable Derivation	References in MacNeish, 1952
Lawson Opposed		bur. 66, Cem. 2 bur. 119, Cem. 2 bur. 122, Cem. 2		Neutral-Wenroe	pp. 13-14, Pl. 1, figs. 1-5
Lawson Incised		bur. 30, Cem. 2		Neutral-Wenroe	p. 14, Pl. 1, figs. 6-9
Ripley Collared	AR 27770 7-67/17 7-88/1	bur. 23, Cem. 1 bur. 67, Cem. 2 bur. 88, Cem. 2	Pl. 29, fig. 3 Pl. 20, fig. 1 Pl. 21, fig. 3	Neutral-Erie	pp. 26-27, Pl. 6, figs. 4, 5
Ripley Triangular	AR 27748 AR 27935	bur. 7, Cem. 1 bur. 56, Cem. 1	Pl. 27, fig. 1 Pl. 29, fig. 1	Neutral-Erie	p. 27, Pl. 8, figs. 1-4
Ripley Corded	AR 29371	bur. 26, Cem. 1	Pl. 27, fig. 3	Erie	pp. 24-25, Pl. 6, figs. 1-3
Ripley Plain		bur. 76, Cem. 2 bur. 121, Cem. 2		Neutral-Erie	pp. 25-26, Pl. 7, figs. 1, 2
Niagara Collared		bur. 29, Cem. 2 bur. 36, Cem. 2 bur. 100, Cem. 2 bur. 143, Cem. 2 bur. 17, Cem. 3 bur. 18, Cem. 3 bur. 28, Cem. 3 bur. 30, Cem. 3		Neutral-Erie	p. 26, Pl. 7, figs. 3-5
Long Point Nocked	AR 27756	bur. 9, Cem. 1 bur. 104, Cem. 2 bur. 121, Cem. 2 bur. 127, Cem. 2 bur. 43, Cem. 3	Pl. 26, fig. 1	Seneca	pp. 43-44, Pl. 16, figs. 4-6
Long Point Horizontal	AR 27827 AR 27763	bur. 49, Cem. 1 bur. 19, Cem. 1 bur. 138, Cem. 2	Pl. 29, fig. 2 Pl. 30, fig. 2	Seneca	p. 44, Pl. 16, figs. 1-3
Seneca Notched	AR 27904	bur. 73, Cem. 1 bur. 21, Cem. 2 bur. 53, Cem. 2 bur. 67, Cem. 2 bur. 72, Cem. 2 bur. 128, Cem. 2 bur. 7, Cem. 3 bur. 25, Cem. 3 bur. 33, Cem. 3 bur. 8, Cem. 4	Pl. 27, fig. 2	Seneca	p. 43, Pl. 14
Dutch Hollow Notched	AR 27935 AR 27882 AR 27751 AR 27747	bur. 56, Cem. 1 bur. 69, Cem. 1 bur. 5, Cem. 1 bur. 50, Cem. 1 bur. 21, Cem. 2 bur. 43, Cem. 2 bur. 70, Cem. 2 bur. 72, Cem. 2 (2) bur. 78, Cem. 2 bur. 88, Cem. 2 bur. 93, Cem. 2 bur. 99, Cem. 2	Pl. 25, fig. 2 Pl. 27, fig. 4	Seneca	p. 43, Pl. 15

Type	Cat. No.	Provenience	Illustrations	Probable Derivation	References in MacNeish, 1952
		bur. 129, Cem. 2			
		bur. 146, Cem. 2			
		bur. 4, Cem. 3			
		bur. 25, Cem. 3			
Seneca Barbed Collar	AR 27747	bur. 50, Cem. 1	Pl. 23, fig. 1	Seneca	pp. 41-42, Pl. 13
	AR 27761	bur. 18, Cem. 1	Pl. 23, fig. 2		
	AR 27773	bur. 30, Cem. 1	Pl. 23, fig. 3		
	AR 27769	bur. 23, Cem. 1	Pl. 24, fig. 1		
	AR 27370	bur. 51, Cem. 1	Pl. 24, fig. 2		
	AR 27836	bur. 54, Cem. 1	Pl. 24, fig. 3		
	AR 27873	bur. 67, Cem. 1	Pl. 25, fig. 3		
	AR 27752	bur. 5, Cem. 1	Pl. 26, fig. 2		
	AR 27801	bur. 41, Cem. 1	Pl. 26, fig. 3		
	AR 27835	bur. 54, Cem. 1	Pl. 26, fig. 4		
	AR 27745	bur. 63, Cem. 1	Pl. 30, fig. 3		
	AR 28161	bur. 8, Cem. 1			
	AR 27746	bur. 36, Cem. 1			
		bur. 11, Cem. 2			
		bur. 14, Cem. 2			
		bur. 15, Cem. 2			
		bur. 23, Cem. 2			
		bur. 28, Cem. 2			
		bur. 30, Cem. 2			
		bur. 49, Cem. 2			
		bur. 55, Cem. 2			
		bur. 60, Cem. 2			
		bur. 101, Cem. 2			
		bur. 9, Cem. 3			
	7-22/1	bur. 22, Cem. 3	Pl. 20, fig. 2		
		bur. 25, Cem. 3			
		bur. 47, Cem. 3			
		bur. 4, Cem. 4			
		bur. 7, Cem. 4			
		bur. A, village			
Myer's Barbed Collar		bur. 75, Cem. 2		Cayuga	p. 49, Pl. 18
Richmond Incised	AR 27833	bur. 53, Cem. 1	Pl. 28, fig. 1	Cayuga	pp. 51-52, Pl. 21
	AR 27760	bur. 18, Cem. 1	Pl. 30, fig. 1		
		bur. 25, Cem. 2			
		bur. 90, Cem. 2			
		bur. 21, Cem. 3			
		bur. 3, Cem. 5			
Cayuga Horizontal	7-10/1	bur. 10, Cem. 2	Pl. 20, fig. 3	Cayuga	p. 52, Pl. 22, figs. 3-5
Genoa Frilled		bur. 33, Cem. 2		Cayuga	pp. 50-51, Pl. 20
		bur. 60, Cem. 2			
		bur. 65, Cem. 2			
		bur. 87, Cem. 2			
		bur. 38, Cem. 3			
		bur. 41, Cem. 3			
Ithaca Linear	AR 27934	bur. 35, Cem. 1	Pl. 28, fig. 2	Andaste-Cayuga	pp. 49-50, Pl. 19
	AR 27826	bur. 48, Cem. 1	Pl. 28, fig. 3		
		bur. 49, Cem. 2			
Thurston Horizontal	7-73/1	bur. 73, Cem. 2	Pl. 21, fig. 1	Onondaga-Oneida	pp. 66, 68-69, Pl. 23, figs. 1-4
	7-10/7	bur. 10, Cem. 2	Pl. 21, fig. 2		
		bur. 107, Cem. 2			
		bur. 51, Cem. 3			
		bur. 7, Cem. 5			